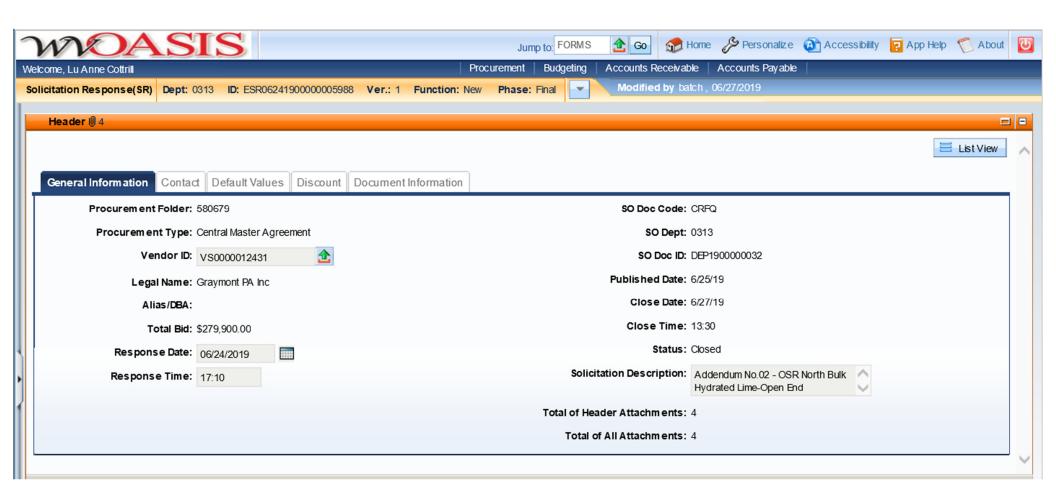


2019 Washington Street, East Charleston, WV 25305 Telephone: 304-558-2306 General Fax: 304-558-6026

Bid Fax: 304-558-3970

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





State of West Virginia Solicitation Response

Proc Folder: 580679

Solicitation Description: Addendum No.02 - OSR North Bulk Hydrated Lime-Open End

Proc Type: Central Master Agreement

| Date issued Solicit | tation Closes | Solicitation Response | | Version |
|---------------------|----------------|-----------------------|---------------------------|---------|
| 2019- 13:30 | -06-27 D:00 | SR | 0313 ESR06241900000005988 | 1 |

VENDOR

VS0000012431

Graymont PA Inc

Solicitation Number: CRFQ 0313 DEP1900000032

Total Bid: \$279,900.00 **Response Date:** 2019-06-24 **Response Time:** 17:10:18

Comments: Graymont does not offer discounts.

FOR INFORMATION CONTACT THE BUYER

Brittany E Ingraham (304) 558-2157 brittany.e.ingraham@wv.gov

Signature on File FEIN # DATE

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

Page: 1 FORM ID: WV-PRC-SR-001

| Line | Comm Ln Desc | Qty | Unit Issue | Unit Price | Ln Total Or Contract Amount |
|--|--|---|---------------------------|----------------------------------|--|
| 1 | Barbour County Hydrated Lime Small Truck (<15 Tons) | 5.00000 | TON | | |
| Comm Code | Manufacturer | Specification | | Model # | |
| 30111604 | | | | | |
| Extended Des | Scription: Barbour County Hydrated L | ime Small Trucl | k (<15 Tons) | | |
| Line 2 | Comm Ln Desc Barbour County Hydrated Lime Large | Qty 5.00000 | Unit Issue | Unit Price | Ln Total Or Contract Amount |
| | Truck (>15 Tons) | | | | |
| Comm Code | Manufacturer | Specification | | Model # | |
| 30111604 | | | | | |
| | | | | | |
| Lino | Comm I n Doco | Otto | Unit Issue | Unit Price | In Total Or Contract Amount |
| | Comm Ln Desc Grant County Hydrated Lime Small | Qty 5.00000 | Unit Issue | Unit Price | Ln Total Or Contract Amount |
| | Comm Ln Desc Grant County Hydrated Lime Small Truck (<15 Tons) | Qty 5.00000 | Unit Issue | Unit Price | Ln Total Or Contract Amount |
| 3 | Grant County Hydrated Lime Small | | | Unit Price Model # | Ln Total Or Contract Amount |
| Line 3 Comm Code 30111604 | Grant County Hydrated Lime Small Truck (<15 Tons) | 5.00000 | | | Ln Total Or Contract Amount |
| 3 Comm Code | Grant County Hydrated Lime Small Truck (<15 Tons) Manufacturer | 5.00000 Specification | TON | | Ln Total Or Contract Amount |
| Comm Code 30111604 Extended Des | Grant County Hydrated Lime Small Truck (<15 Tons) Manufacturer | 5.00000 Specification | TON | | Ln Total Or Contract Amount Ln Total Or Contract Amount |
| 3 Comm Code 30111604 | Grant County Hydrated Lime Small Truck (<15 Tons) Manufacturer scription : Grant County Hydrated Lim | 5.00000 Specification e Small Truck (| TON <15 Tons) | Model # | |
| Comm Code 30111604 Extended Des | Grant County Hydrated Lime Small Truck (<15 Tons) Manufacturer scription: Grant County Hydrated Lim Comm Ln Desc Grant County Hydrated Lime Large | 5.00000 Specification e Small Truck (| TON <15 Tons) Unit Issue | Model # | Ln Total Or Contract Amount |
| Comm Code 30111604 Extended Des | Grant County Hydrated Lime Small Truck (<15 Tons) Manufacturer Scription: Grant County Hydrated Lime Comm Ln Desc Grant County Hydrated Lime Large Truck (>15 Tons) | Specification e Small Truck (| TON <15 Tons) Unit Issue | Model # Unit Price \$180.000000 | Ln Total Or Contract Amount |
| Comm Code 30111604 Extended Des Line 4 | Grant County Hydrated Lime Small Truck (<15 Tons) Manufacturer scription: Grant County Hydrated Lim Comm Ln Desc Grant County Hydrated Lime Large Truck (>15 Tons) Manufacturer | Specification E Small Truck (Oty 320.00000 Specification | <15 Tons) Unit Issue TON | Model # Unit Price \$180.000000 | Ln Total Or Contract Amount |

Comments: Minimum 20-ton Truckloads Split Deliveries 30 Miles apart maximum

| Line | Comm Ln Desc | Qty | Unit Issue | Unit Price | Ln Total Or Contract Amount |
|--|--|--|---------------------------------|---------------------|--|
| 5 | Marion County Hydrated Lime Small Truck (<15 Tons) | 5.00000 | TON | | |
| Comm Code | Manufacturer | Specification | | Model # | |
| 30111604 | | · | | | |
| Extended Des | Scription: Mariont County Hydrated L | ime Small Truck | ((<15 Tons) | | |
| Line | Comm Ln Desc | Qty | Unit Issue | Unit Price | Ln Total Or Contract Amount |
| 6 | Marion County Hydrated Lime Large Truck (>15 Tons) | 5.00000 | TON | | |
| Comm Code | Manufacturer | Specification | | Model # | |
| 30111604 | | | | | |
| Line | Comm Ln Desc | | Huit Innu | | La Tatal On Contract Assessed |
| LIIIE | Comm Ln Desc | Qty | Unit Issue | Unit Price | Ln Total Or Contract Amount |
| 7 | Mineral County Hydrated Lime Small Truck (<15 Tons) | Qty 5.00000 | TON | Unit Price | Ln Total Or Contract Amount |
| | Mineral County Hydrated Lime Small | | | Model # | Ln Total Or Contract Amount |
| 7 | Mineral County Hydrated Lime Small Truck (<15 Tons) | 5.00000 | | | Ln Total Or Contract Amount |
| 7 Comm Code | Mineral County Hydrated Lime Small Truck (<15 Tons) Manufacturer | 5.00000 Specification | TON | | Ln Total Or Contract Amount |
| 7 Comm Code 30111604 | Mineral County Hydrated Lime Small Truck (<15 Tons) Manufacturer | 5.00000 Specification | TON | | Ln Total Or Contract Amount Ln Total Or Contract Amount |
| 7 Comm Code 30111604 Extended Des | Mineral County Hydrated Lime Small Truck (<15 Tons) Manufacturer scription : Mineral County Hydrated Li | 5.00000 Specification ime Small Truck | TON s (<15 Tons) | Model # | |
| 7 Comm Code 30111604 Extended Des | Mineral County Hydrated Lime Small Truck (<15 Tons) Manufacturer Scription: Mineral County Hydrated Li Comm Ln Desc Mineral County Hydratedd Lime | Specification Specification ime Small Truck Qty 30.00000 | TON (<15 Tons) Unit Issue | Model # | |
| Comm Code 30111604 Extended Des | Mineral County Hydrated Lime Small Truck (<15 Tons) Manufacturer Scription: Mineral County Hydrated Lime Comm Ln Desc Mineral County Hydratedd Lime Large Truck (>15 Tons) | 5.00000 Specification ime Small Truck | TON (<15 Tons) Unit Issue | Model # Unit Price | |
| Comm Code 30111604 Extended Des Line 8 | Mineral County Hydrated Lime Small Truck (<15 Tons) Manufacturer Scription: Mineral County Hydrated Lime Comm Ln Desc Mineral County Hydratedd Lime Large Truck (>15 Tons) Manufacturer | Specification Specification George Qty 30.00000 Specification | TON (<15 Tons) Unit Issue TON | Model # Unit Price | |

| Line | Comm Ln Desc | Qty | Unit Issue | Unit Price | Ln Total Or Contract Amount |
|------|---|----------|------------|------------|-----------------------------|
| 9 | Monongalia County Hydrated Lime Small Truck (<15 Tons) | 60.00000 | TON | | |

| Comm Code | Manufacturer | Specification | Model # | |
|-----------|--------------|---------------|---------|--|
| 30111604 | | | | |

Extended Description: Monongalia County Hydrated Lime Small Truck (<15 Tons)

| Line | Comm Ln Desc | Qty | Unit Issue | Unit Price | Ln Total Or Contract Amount |
|------|---|-----------|------------|--------------|-----------------------------|
| 10 | Monongalia County Hydrated Lime Large Truck (>15 Tons) | 350.00000 | TON | \$180.000000 | \$63,000.00 |

| Comm Code | Manufacturer | Specification | Model # | |
|-----------|--------------|---------------|---------|--|
| 30111604 | | | | |

Extended Description: Monongalia County Hydrated Lime Large Truck (>15 Tons)

Comments: Minimum 20-ton Truckloads Split Deliveries 30 Miles apart maximum.

| Line | Comm Ln Desc | Qty | Unit Issue | Unit Price | Ln Total Or Contract Amount |
|------|---|-----------|------------|--------------|-----------------------------|
| 11 | Preston County Hydrated Lime Small Truck (<15 Tons) | 225.00000 | TON | \$180.000000 | \$40,500.00 |

| Comm Code | Manufacturer | Specification | Model # | |
|-----------|--------------|---------------|---------|--|
| 30111604 | | | | |
| | | | | |

Extended Description : Preston County Hydrated Lime Small Truck (<15 Tons)

Comments: Minimum 20-ton Truckloads Split Deliveries 30 miles apart maximum.

| Line | Comm Ln Desc | Qty | Unit Issue | Unit Price | Ln Total Or Contract Amount |
|------|--|----------|------------|--------------|-----------------------------|
| 12 | Preston County Hydrated Lime Large Truck (>15 Tons) | 60.00000 | TON | \$180.000000 | \$10,800.00 |

| Comm Code | Manufacturer | Specification | Model # | |
|-----------|--------------|---------------|---------|--|
| 30111604 | | | | |
| | | | | |

Extended Description: Preston County Hydrated Lime Large Truck (>15 Tons)

Page: 4

Comments: Minimum 20-ton Truckloads Split Deliveries 30 miles apart maximum.

| Line | Comm Ln Desc | Qty | Unit Issue | Unit Price | Ln Total Or Contract Amount |
|------|---|---------|------------|------------|-----------------------------|
| 13 | Tucker County Hydrated Lime Small Truck (<15 Tons) | 5.00000 | TON | | |

| Comm Code | Manufacturer | Specification | Model # | |
|-----------|--------------|---------------|---------|--|
| 30111604 | | | | |

Extended Description:

Tucker County Hydrated Lime Small Truck (<15 Tons)

| Line | Comm Ln Desc | Qty | Unit Issue | Unit Price | Ln Total Or Contract Amount | |
|------|--|---------|------------|------------|-----------------------------|--|
| 14 | Tucker County Hydrated Lime Large Truck (>15 Tons) | 5.00000 | TON | | | |

| Comm Code | Manufacturer | Specification | Model # | |
|-----------|--------------|---------------|---------|--|
| 30111604 | | | | |
| | | | | |

Extended Description:

Tucker County Hydrated Lime Large Truck (>15 Tons)

| Line | Comm Ln Desc | Qty | Unit Issue | Unit Price | Ln Total Or Contract Amount |
|------|--|---------|------------|------------|-----------------------------|
| 15 | Upsher County Hydrated Lime Small Truck (<15 Tons) | 5.00000 | TON | | |

| Comm Code | Manufacturer | Specification | Model # | |
|-----------|--------------|---------------|---------|--|
| 30111604 | | | | |

Extended Description :

Upsher County Hydrated Lime Small Truck (<15 Tons)

| Line | Comm Ln Desc | Qty | Unit Issue | Unit Price | Ln Total Or Contract Amount |
|------|--|-----------|------------|--------------|-----------------------------|
| 16 | Upsher County Hydrated Lime Large Truck (>15 Tons) | 600.00000 | TON | \$180.000000 | \$108,000.00 |

| Comm Code | Manufacturer | Specification | Model # | |
|-----------|--------------|---------------|---------|--|
| 30111604 | | | | |
| | | | | |

Extended Description: Upsher County Hydrated Lime Large Truck (>15 Tons)

Comments: Minimum 20-ton Truckloads Split Deliveries 30 Miles apart maximum.

| Contract Administrator and the initial point of contact for matters relating to this Contract. |
|--|
| Chales Country, account Manager |
| (Name, Title) |
| Charles Lucostic / Account Manager |
| (Printed Name and Title) |
| 194 Match Factory Place, Bellefonte, PA 16823 |
| (Address) 814-353-2121 / 814-353-1349 |
| (Phone Number) / (Fax Number) |
| clucostic@graymont.com |
| (email address) |
| |
| 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. |
| Graymont (PA) Inc. |
| (Company) Oales C Surater, account Manager |
| (Authorized Signature) (Representative Name, Title) |

Charles Lucostic / Account Manger

(Printed Name and Title of Authorized Representative)

814-353-2121 / 814-353-1349

June 19, 2019

(Phone Number) (Fax Number)

DESIGNATED CONTACT: Vendor appoints the individual identified in this Section as the

(Date)

REQUEST FOR QUOTATION OSR North Bulk Hydrated Lime

| Contract Manager: | Charles Lucostic |
|-------------------|------------------------|
| Telephone Number: | 814-353-2121 |
| Fax Number: | 814-353-1349 |
| Email Address: | clucostic@graymont.com |

ADDENDUM ACKNOWLEDGEMENT FORM SOLICITATION NO.: CRFQ DEP19*32

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.

| (| X |] | Addendum No. I | [| } | Addendum No. 6 |
|-----------|----|------|--------------------------------|-------|------|---|
| | - |] | Addendum No. 2 | [| J | Addendum No. 7 |
| [| • | } | Addendum No. 3 | [|] | Addendum No. 8 |
| [| |] | Addendum No. 4 | [|] | Addendum No. 9 |
| [| |] | Addendum No. 5 | [|) | Addendum No. 10 |
| further u | nđ | ersi | and that any verbal representa | atior | ា ៣ខ | denda may be cause for rejection of this bid. It ade or assumed to be made during any oral and any state personnel is not binding. Only the |

Addendum Numbers Received:

(Check the box next to each addendum received)

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

information issued in writing and added to the specifications by an official addendum is binding.

Graymont (PA) Inc.

June 19, 2019

SOLICITATION NUMBER: CRFQ DEP1900000032 Addendum Number: No.01

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:

| 1 | / | Modify bid opening date and time |
|---|---|--|
| [| 1 | Modify specifications of product or service being sought |
| [| I | Attachment of vendor questions and responses |
| 1 | 1 | Attachment of pre-bid sign-in sheet |
| [| i | Correction of error |
| ſ | i | Other |

Description of Modification to Solicitation:

Addendum issued to publish and distribute the attached documentation to the vendor community.

1. The purpose of this addendum is to modify the bid opening date as follows:

Bid opening WAS: 6/21/2019 at 1:30 PM EDT Bid opening IS NOW: 6/26/2019 at 1:30 PM EDT

No other changes.

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:

- All provisions of the Solicitation and other addenda not modified herein shall remain in full force and effect.
- 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.

Revised 6/8/2012

ADDENDUM ACKNOWLEDGEMENT FORM SOLICITATION NO.: CRFQ DEP19*32

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.

| | | | Numbers Received: ox next to each addendum recei | ved | () | |
|--------------------|-------------|-------------|--|---------------------|----------------------|--|
| | [|] | Addendum No. 1 | [|] | Addendum No. 6 |
| | [3 | (] | Addendum No. 2 | [|] | Addendum No. 7 |
| | [|] | Addendum No. 3 | [|] | Addendum No. 8 |
| | ſ | 1 | Addendum No. 4 | [| J | Addendum No. 9 |
| | ĺ |] | Addendum No. 5 | [|] | Addendum No. 10 |
| further discuss | une sion | ders hei | tand that any verbal representa d between Vendor's representa | tior tive e s | n ma es a peci | idenda may be cause for rejection of this bid. I ade or assumed to be made during any oral and any state personnel is not binding. Only the fications by an official addendum is binding. ymont (PA) Inc. |
| | | | | | | Company |
| | | | | | (| Authorized Signature |
| | | | | J | un | e 19, 2019 |
| | | | • | | | Date |

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

OSR North Bulk Hydrated Lime CRFQ DEP1900000032 Vendor Questions and Agency Answers Addendum #2

- Q1.) If you could please help us get the Zip codes for the deliveries of the following counties:
 - Hydrated Lime -- to Monongalia County, Preston County, and Upshur County.
 - A1.) See attached spreadsheet for the zip code for each site. Note per Item 6.4 of the contract:

"Over the terms of the Contract WVDEP may acquire additional sites within the Monongalia, Preston, Grant, Tucker, Mineral, Upshur, Barbour and Marion, Clay Counties in West Virginia."

The sites in the spreadsheet represent all data currently available.

- Q2.) Could you please provide a list of the actual AMD plant locations (nearest town) and truckload size for each?
- A2.) See attached spreadsheet for the nearest town and truck sizes. Note per Item 6.4 of the contract:

"Over the terms of the Contract WVDEP may acquire additional sites within the Monongalia, Preston, Grant, Tucker, Mineral, Upshur, Barbour and Marion, Clay Counties in West Virginia."

The sites in the spreadsheet represent all data currently available.

- Q3.) We assume the small truck load sites cannot be accessed with a tractor trailer due to road conditions. Is this correct?
 - A3.) To clarify, roads are maintained on the sites to facilitate vehicular traffic. There are some sites that turning and maneuverability for large 18-wheeled trucks is very limited. Other sites have limited capacity so that large truck deliveries are not practical. In rare occasions, there are weight limitations to the county roads that access that location therefore large 18-wheel trucks cannot access the site.

Addendum #2

| Project Site Name (Projects) | Current | County | Nearest Town | Zip Code | Permit Number | GPS Latitud | GPS e Longitude | Current Product Type* | Silo Size (Tons) | Truck Size | Projected Tons Per Year** |
|--|---|-----------------|-----------------|-------------|------------------|----------------|------------------------|----------------------------------|------------------------|---|---------------------------------|
| Barbour County WV Siles KEISTER COAL (Site 1 & 2) | | Barbour | Belington | 26405 | 184-77 | 39,0431 | -80.0286 | Pelletized Lime | 10 | Small | 20 |
| Grant County WV Sites | | | | 10100 | | | -00.0200 | 7 CACOZEG ESTIS | | - Ollian | |
| BUFFALO COAL | | Grant | Davis | 25739 | S-52-80 | 39 1433 | -79 2019 | Collet red Lime | 40 | Small | 20 |
| BUFFALO COAL (upper&lower) | | Grant | Davis | 26739 | S-2003-88 | 39 2078 | | Pelletized Lime Hydrated Lime | 50 | Large | 320 |
| Marion County WV Sites | | | | | | | | | | | |
| LAROSA FUELS | | Marion | Jordan | 26554 | S-1051-86 | 39.5419 | -80 0736 | Enhanced Lime | 50 | Large | 600 |
| Stiment Charles IRB Cites | | | | | | | | | | | |
| Mineral County WV Sites CHESTNUT RIDGE COAL | | Mineral | Elk Garden | 26717 | S-28-83 | 39 3758 | -79 1778 | Hydraled Lime | 30 | Large | 30 |
| | *************************************** | | | | | | | 11/4/2/2014 | <u>`````</u> | | |
| Monongalia County WV Sites ED-E DEVELOPMENT (Site 1 & S | iite 2) | Monongalia | Morgantown | 26508 | S-10-81 | 39 4872 | -79 9011 | Hydrated Lime | 100 | Large | 100 |
| ED-E DEVELOPMENT | | Monongalia | Morganiown | 26508 | S-1032-86 | 39.4755 | | Hydrated Lime | 20 | Small | 20 |
| EDWARD E. THOMPSON | | Monongalia | Morgantown | 26508 | S-1041-89 | 39.7034 | -79 8645 | Enhanced Lime | 20 | Large | 50 |
| OMEGA MINING | | Monongalia | Morgantown | 26508 | D-79-82 | 39.5333 | 79 9353 | Enhanced Lime | 100 | Large | 200 |
| S. KELLY INDUSTRIES | | Monongalia | Morgantown | 26508 | 51-78 | 39.5139 | -79 9472 | Hydrated Lime | 20 | \$mall | 20 |
| STEWARTOWN COAL | | Monongalia | Morganiown | 265D8 | 67-78 | 39,7194 | 79.8985 | Pelletized Lime | 20 | Small | 2 |
| VALLEY MINING | | Monongalia | Brookhaven | 26508 | S-17-82 | 39 5869 | 79 8958 | Pelletized Lime | 20 | Small | 20 |
| VALLEY MINING | | Monongalia | Morgantown | 26509 | \$-64-83 | 39.6478 | 79.8472 | Hydrated Lime | 25 | Small | 20 |
| VMS | | Monongalia | Morgantown | 26508 | S-1045-87 | 39.4821 | -79.9132 | Pelletized Lime | 20 | Small | 15 |
| Z & F DEVELOPMENT | | Monongalia | Morgantown | 26598 | S-21-B4 | 39 555 | -80.0281 | Pelletized Lime | 25 | Small | 20 |
| Preston County WV Sites | | | | | | | | | | | |
| AMANDA NICOLE FUELS | ~ | Preston | Tunnellon | 26444 | S-1018-88 | 39 3694 | -79.7708 | Hydraled Lime | 40 | Small | 170 |
| BOLINGREEN MINING | | Preston | Albright | 26537 | S-1024-88 | 39.5276 | -79.6582 | Pelletized Lime | 5 | Small | 2 |
| BORGMAN COAL | | Preston | Kingwood | 26444 | EM-32 | 39.4464 | -79.7331 | Hydrated Lime | | Small | 25 |
| BUFFALO COAL | | Preston | Kempton | 26716 | S-122-80 | 39 2189 | -79 4869 | Pellelized Lime | 30 | Large | 20 |
| DAUGHERTY COAL (Site 1 & 2) | | Preston | Masonlown | 26542 | 5-1009-86 | 39 5444 | -79.7305 | Pelletized Lime | 50 | Small | 30 |
| DAUGHERTY COAL | | Preston | Masonlown | 26542 | 192-77 | 39 553 | -79.7397 | Pellelized Lime | 25 | Small | 170 |
| DAUGHERTY COAL | | Preston | Masontown | 25542 | 65 77 | 39.5706 | 79 7466 | Pettetized Lime | 50 | Large | 75 |
| DECONDOR COAL | | Preston | Recdsville | 26537 | U-147-82 | 39 4919 | -79.7683 | Hydraled Lime | 20 | Large | 75 |
| F & M Cont | | Preston | Fellowsville | 26452 | S-1044-87 | 39.3011 | -79,7711 | Hydraled Lime | 50 | Large | 250 |
| FREEPORT MINING | | Preston | Hapewell | 26525 | S-1005-95 | 39 6429 | -79 7369 | Pelletized Lime | 50 | | 150 |
| GLADE RUN IN-STREAM DOSER | | Preston | Valley Point | 26525 | GR-DOS-17 | 39.5711 | -79 648 | Enhanced Lime | 30 | Large Large | 750 |
| HALLELUJAH MINING | | Preston | Kingwood | 26537 | 40-81 | 39 4969 | -79 7187 | Pelletized Lime | 20 | Small | 10 |
| HIDDEN VALLEY COAL | | Presion | Hazelton | 26525 | S-60-84 | 39 5431 | -79 5286 | Pelletized Lime | 5 | Sma⊪ | 2 |
| INTER-STATE LUMBER | | Presion | Tunnelton | 26410 | S-52-83 | 39.3975 | -79.7948 | Pellelized Lime | 25 | Small | 2 |
| INTER-STATE LUMBER | | Preston | Aibright | 26525 | 176 77 | 39.5236 | 79 5958 | Pelletized Lime | 5 | Smail | 2 |
| JEB | | Preston | Kingwood | 26537 | S 61 82 | 39.4611 | -79.725 | Pelletized Lime | 10 | Small | 6 |
| J.E.B. | | Preston | Kingwood | 26537 | S-1053-86 | 39.4756 | 79 7042 | Polletized Lime | 5 | Small | 2 |
| LEFT FORK LITTLE SANDY IN ST | REAM | Presion | Tunnelton | 26444 | LF-DOS-18 | 39 3659 | 79.7645 | Enhanced Lime | 30 | Large | 1000 |
| DOSER MAPLE RUN IN-STREAM DOSER | | Preston | Evansville | 24660 | MR-DOS-18 | 39 3671 | | | | | 1 |
| MARTIN CREEK IN STREAM DOS | | Preston | Albright | 26519 | MC-DOS-18 | 39 552023 | -79 8851 -79 651962 | Enhanced Lime | 30 30 | Large | 550 |
| MARY RUTH | | Preston | Valley Point | 26525 | S-1015-88 | 39.5806 | -79.5889 | Enhanced Lime | | Small | 20 5 |
| PRESTON ENERGY | | Presion | Howesville | 26444 | O-43-85 | 39.4253 | -79.7642 | Pollotized Lime | 20 5 | Small Small | 6 |
| PRESTON ENERGY | | Preston | Howesville | 26444 | O-1035-87 | 39.4278 | 79.7681 | Pelletized Lime | 50 | | co l |
| ROCKVILLE MINING (Site 1 & 2) | | Preston | Ml. Nebo | 26525 | 237-76 | 39 5833 | 79 6931 | Hydraled Lime Pelletized Lime | 6 | Large Small | 2 |
| ROCKVILLE MINING (Site 4 & 5) | | Preston | MI. Nebo | 26525 | S-1035-86 | 39 5848 | -79 6971 | Pellelized Lime | 1 | Small | 1 |
| I & I FUELS | | Preston | Albright | 26519 | U-125-63 | 39 5501 | 79 6565 | Pelletized Lime | 1 | Small | 2 |
| T & T FUELS | | Preston | Albright | 26519 | EM-113 | 39.5433 | 79.6323 | Enhanced Lime | 100 | Large | 1200 |
| WOCAP ENERGY RESOURCES | | Preston | Kingwood | 26444 | S-26-85 | 39 4603 | 79 7331 | Hydrated Lime | 50 | Small | 30 |
| Upshur County WV Sites | | | | | | | | | | *************************************** | |
| DELTA MINING | | Upshur | Buckhannon | 26201 | U-2024-87 | 38.9492 | -80.1039 | Pellotized Lime | 25 | Small | 20 |
| DLM COAL (also 23-76) | | Upshur | Alexander | 26237 | 58-77 | 38 8183 | 80.2003 | Enhanced Lime | 100 | Large | 600 |
| Clay County WV Sites | | | | | | | | | | | |
| Greendale Coals Inc. | *************************************** | Clay | Lizemores | 25125 | S-75-83 | 38 2986 | -81 1583 | Enhanced Lime | 100 | Large | 200 |
| Product used at the site subject t | n | | | | | | | | | | |
| change. | | | | | | | Estimated Large | Truck Delivered P | er Year (>: | 20 Tons) | 6230 |
| ** Yearly usage is estimated base | on best | iata available. | Subject to | | | | | | | | |
| several factors including precipita | tion, chan | ges în water g | uality and | | | | | | | | |
| SOS REGISSOR WHICHHICY. | | | | | | | Estimated Const | Truck Delivered P | er Year i- | 20 Tonel | 664 |
| | | | | | | | Commence (10d) | LIMER LICEIPEICG P | - 19411 | 171131 | VV- |

Estimated Small Truck Delivered Per Year (<20 Tons) 664

Estimated Total Tons Per Year 6894

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 exceed 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: Graymont (PA) Inc | • |
|--|-----------------------------|
| Authorized Signature: July Hursley | Date: 6-24-19 |
| State of PA Charles Lucostic | |
| County of <u>Centre</u> , to-wit: | |
| Taken, subscribed, and sworn to before me this $\frac{21}{2}$ da | y of Jun , 20 19 |
| My Commission expires | , , 20 |
| AFFIX SEAL HERE | NOTARY PUBLIC Du E Catherna |
| | |

Commonwealth of Pennsylvania - Notary Seal Sue E. Catherman, Notary Public Centre County My commission expires November 2, 2022 Commission number 1024853

Member, Pennsylvania Association of Notaries

Purchasing Affidavit (Revised 01/19/2018)



Lime and Limestone products

Eastern Region Office, 25 rue de Lauzon, Suite 206, Boucherville, QC, J4B 1E7, Canada 1 450 449-2262

HIGH CALCIUM HYDRATED LIME

Nominal size: 25 µm – 0

Pleasant Gap, Pennsylvania

PRODUCT DESCRIPTION

A fine white powder made by reacting quicklime with sufficient water to convert the calcium oxide (CaO) to calcium hydroxide (Ca(OH)₂).

| TYPICAL CHEMICAL PROPERTIE (ASTM C25, C1271, C1301) | S |
|--|------|
| Total Calcium expressed as Ca(OH) ₂ (%) | 96.6 |
| Avail. Calcium Hydroxide (Ca(OH) ₂) (%) | 93.7 |
| Magnesium Oxide (MgO) (%) | 0.9 |
| Silica (SiO ₂) (%) | 1.2 |
| Ferric Oxide (Fe ₂ O ₃) (%) | 0.2 |
| Alumina (Al ₂ O ₃) (%) | 0.5 |
| Manganese Oxide (MnO) (ppm) | < 50 |
| Total Sulfur (S) (%) | 0.03 |
| Loss on ignition (%) | 24.0 |
| Calcium Carbonate (CaCO ₃) (%) | 2.2 |
| Moisture (H ₂ O) (%) | 0.8 |

| TYPICAL PHYSICAL PROPERTII (ASTM C110) | ES | |
|---|-----------|--|
| Bulk Density | | |
| ▲ Loose / Packed, (kg/m³) | 310 / 506 | |
| ▲ Loose / Packed, (lb/ft³) | 19.4/31.6 | |
| Angle of Internal Friction, Φ (°) | 51.2 | |
| BET Surface Area (m²/g) 18.8 | | |
| Pore Size (Å) 194 | | |
| Pore Volume (cm³/g) 0.091 | | |
| Volume Mean Diameter, D[4,3] (µm) 11.6 | | |
| Diameter at 50%, Median, DV50 (µm) 9.1 | | |
| Diameter at 90%, DV90 (µm) | 23.6 | |

| CLASSICAL REFERENCE DATA (CRC Handbook of Chemistry and Physics | , Boynton) |
|---|------------|
| Specific Gravity | 2.3 - 2.4 |
| Solubility in Water (20 °C) (g/l) | 1.65 |
| pH (saturated solution) (25 °C) | 12.454 |
| Decomposition Temperature (°C) | 580 |
| Hardness (Mohs) | 2 - 3 |
| Specific Heat (0 °C) (cal/g*°C) | 0.27 |
| Heat of Solution (18 °C) (cal/mole) | 2800 |

| (Mode: Wet Dispersion, Format: Volume) | | | | |
|--|-----------|--|--|--|
| Diameter (µm) | % Passing | | | |
| 90 | 100 | | | |
| 45 | 98.6 | | | |
| 38 | 97.4 | | | |
| 32 | 95.7 | | | |
| 25 | 91.8 | | | |
| 20 | 86.3 | | | |

LASED DADTICLE SIZE DISTRIBUTION



ANSI / NSF 60
DRINKING WATER TREATMENT ADDITIVES
< 88 Y 5 >
MAXIMUM USE LEVEL: 650 mg/l.

Meets the AWWA standard B202-13

NOTICE

The test data herein is based on average results on production samples. Product shipments are subject to normal variation. Accordingly, test data cannot be taken as establishing maximum or minimum specifications. Product Codes: 2000 (Bulk), 2002 (50lb bags)



SAFETY DATA SHEET

HIGH CALCIUM HYDRATED LIME

GRAYMONT

Section 1. Identification

GHS product identifier

: HIGH CALCIUM HYDRATED LIME

Code

: Not available.

Other means of identification : Hydrated Lime, Calcitic Hydrated Lime, Lime, Slaked lime, Lime Putty, Lime Slurry, Milk

of Lime, Calcium Hydroxide.

Product type

Solid.

Relevant identified uses of the substance or mixture and uses advised against

Identified uses

: Neutralization, flocculation, stabilization, absorption.

Supplier/Manufacturer

: GRAYMONT

#200-10991 Shellbridge Way Richmond, BC V6X 3C6

Canada

Phone: 1 604 207-4292 Toll free: 1 866 207-4292 Fax: 1 604 207-9014

Web Site: http://www.graymont.com/

Emergency telephone number (with hours of operation)

: CHEMTREC, US (800-424-9300) INTERNATIONAL: (703-527-3887)

Section 2. Hazards identification

OSHA/HCS status

substance or mixture

: This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the

: SKIN CORROSION/IRRITATION - Category 2

SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1

CARCINOGENICITY (inhalation) - Category 1A

SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract

irritation) - Category 3

SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (respiratory tract) -

Category 1

GHS label elements

Hazard pictograms







Signal word : Danger

Hazard statements : H318 - Causes serious eye damage.

H315 - Causes skin irritation.

H350 - May cause cancer if inhaled. H335 - May cause respiratory irritation.

H372 - Causes damage to organs through prolonged or repeated exposure. (respiratory

tract)

Precautionary statements





Section 2. Hazards identification

Prevention

: P201 - Obtain special instructions before use.

P202 - Do not handle until all safety precautions have been read and understood.

P280 - Wear protective gloves. Wear eye or face protection. Wear protective clothing.

P271 - Use only outdoors or in a well-ventilated area.

P260 - Do not breathe dust.

P270 - Do not eat, drink or smoke when using this product.

P264 - Wash hands thoroughly after handling.

Response : P314 - Get medical attention if you feel unwell.

P308 + P313 - IF exposed or concerned: Get medical attention.

P304 + P340 + P312 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or physician if you feel

unwell.

P302 + P352 + P362 + P363 - IF ON SKIN: Wash with plenty of soap and water. Take

off contaminated clothing. Wash contaminated clothing before reuse.

P332 + P313 - If skin irritation occurs: Get medical attention.

P305 + P351 + P338 + P310 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Immediately call a POISON CENTER or physician.

Storage : P401 - Store to minimize dust generation.

Disposal : P501 - Dispose of contents and container in accordance with all local, regional, national

and international regulations.

Hazards not otherwise classified

: None known.

Section 3. Composition/information on ingredients

Substance/mixture

: Mixture

Other means of identification : Hydrated Lime, Calcitic Hydrated Lime, Lime, Slaked lime, Lime Putty, Lime Slurry, Milk of Lime, Calcium Hydroxide.

| Ingredient name | % | CAS number |
|---------------------------------------|------------|------------|
| Calcium Hydroxide | 87 - 99 | 1305-62-0 |
| Crystalline silica, respirable powder | 0.0001 - 1 | 14808-60-7 |

Crystalline silica has been found in some products at or above detection level 0.1%. Concentration is dependent upon limestone source.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

Eye contact

: Get medical attention immediately. Call a poison center or physician. Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 20 minutes. Chemical burns must be treated promptly by a physician. Get medical attention immediately. Call a poison center or physician.





Section 4. First aid measures

Inhalation

: Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Skin contact

: Get medical attention immediately. Call a poison center or physician. Flush contaminated skin with plenty of water. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 20 minutes. Chemical burns must be treated promptly by a physician. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion

Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Chemical burns must be treated promptly by a physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact : Causes serious eye damage. Inhalation : May cause respiratory irritation.

Skin contact : Causes skin irritation.

Ingestion : No known significant effects or critical hazards.

Over-exposure signs/symptoms

Eye contact : Adverse symptoms may include the following:

pain watering redness

Inhalation : Adverse symptoms may include the following:

respiratory tract irritation

coughing

burning sensation

Skin contact: Adverse symptoms may include the following:

pain or irritation

redness

blistering may occur

Ingestion : Adverse symptoms may include the following:

burning sensation

abdominal cramps and pain

vomiting

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician : Treat symptomatically. Contact poison treatment specialist immediately if large

quantities have been ingested or inhaled.

Specific treatments : No specific treatment.





Section 4. First aid measures

Protection of first-aiders

: No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media

: Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media

: None known.

Specific hazards arising from the chemical

: No specific fire or explosion hazard.

Hazardous thermal decomposition products

: None.

Special protective actions for fire-fighters

: No special measures are required.

Special protective equipment for fire-fighters

: Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

: No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders:

If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions

: Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

Spill

: Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Avoid dust generation. Do not dry sweep. Vacuum dust with equipment fitted with a HEPA filter and place in a closed, labeled waste container. Dispose of via a licensed waste disposal contractor. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.





Section 7. Handling and storage

Precautions for safe handling

Protective measures

: Put on appropriate personal protective equipment (see Section 8). Avoid exposure - obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not ingest. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous.

Advice on general occupational hygiene

: Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities

: Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store to minimize dust generation. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

| Ingredient name | Exposure limits |
|--|---|
| Calcium Hydroxide Crystalline silica, respirable powder | ACGIH TLV (United States, 3/2017). TWA: 5 mg/m³ 8 hours. NIOSH REL (United States, 10/2016). TWA: 5 mg/m³ 10 hours. OSHA PEL (United States, 6/2016). TWA: 5 mg/m³ 8 hours. Form: Respirable fraction TWA: 15 mg/m³ 8 hours. Form: Total dust MSHA PEL TWA 8/40 hours: 5 mg/m³ OSHA PEL Z3 (United States, 6/2016). TWA: 250 mppof 8 hours. Form: Respirable TWA: 10 mg/m³ 8 hours. Form: Respirable TWA: 5 mg/m3 Form: Respirable fraction TWA: 5 mg/m3 Form: Total dust NIOSH REL (United States, 10/2013). TWA: 0.05 mg/m³ 10 hours. Form: Respirable dust TWA: 10 mg/m³ Form: Total dust OSHA PEL (United States, 6/2016). TWA: 5 mg/m³ 8 hours. Form: Respirable fraction TWA: 50 µg/m³ 8 hours. Form: Respirable fraction TWA: 50 µg/m³ 8 hours. Form: Respirable fraction MSHA PEL TWA 8/40 hours: 30 mg/m³/(%SiO2)+2 mg/m³ Form: Total dust 10 mg/m³/(%SiO2)+2 mg/m³ Form: Respirable dust |

Canada

Occupational exposure limits





Section 8. Exposure controls/personal protection

| Ingredient name | Exposure limits |
|--|--|
| Calcium Hydroxide Crystalline silica, respirable powder | CA Alberta Provincial (Canada, 4/2009). 8 hrs OEL: 5 mg/m³ 8 hours. CA British Columbia Provincial (Canada, 6/2017). TWA: 5 mg/m³ 8 hours. CA Ontario Provincial (Canada, 1/2018). TWA: 5 mg/m³ 8 hours. CA Quebec Provincial (Canada, 1/2014). TWAEV: 5 mg/m³ 8 hours. CA Saskatchewan Provincial (Canada, 7/2013). STEL: 10 mg/m³ 15 minutes. TWA: 5 mg/m³ 8 hours. CA British Columbia Provincial (Canada, 6/2017). TWA: 0.025 mg/m³ 8 hours. Form: Respirable CA Quebec Provincial (Canada, 1/2014). TWAEV: 0.1 mg/m³ 8 hours. Form: Respirable dust CA Ontario Provincial (Canada, 1/2018). TWA: 0.1 mg/m³ 8 hours. Form: Respirable fraction CA Saskatchewan Provincial (Canada, 7/2013). |
| | TWA: 0.05 mg/m³ 8 hours. Form: Respirable fraction CA Alberta Provincial (Canada, 4/2009). 8 hrs OEL: 0.025 mg/m³ 8 hours. Form: Respirable particulate. |

Appropriate engineering controls

: Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. Engineering controls may be required to control the primary or secondary risks associated with this product.

Environmental exposure controls

: Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation.

Individual protection measures

Hygiene measures

: Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period.

Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection

Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles and/ or face shield. If inhalation hazards exist, a full-face respirator may be required instead.

Skin protection

Hand protection

: Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body protection

: Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Other skin protection

: Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.





Section 8. Exposure controls/personal protection

Respiratory protection

: Use a properly fitted, particulate filter respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. Wear an appropriate NIOSH approved respirator if concentration levels exceed the safe exposure limits.

Section 9. Physical and chemical properties

Appearance

Physical state : Solid. [Fine powder.]

Color : White.

Odor : Sweet, soil like odor.

Odor threshold : Not available.

Hg : 12.45 [Sat. soln.] at 25°C

Melting point : Not available. : Not available. **Boiling point** : Not applicable. Flash point **Evaporation rate** : Not available. : Not available. Flammability (solid, gas) Lower and upper explosive

(flammable) limits

: Not available.

: Not available. Vapor pressure : Not available. Vapor density Relative density : 2.3 to 2.4

: 0.165 g/100 g at 20°C Solubility in water

Partition coefficient: n-

octanol/water

: Not available.

Auto-ignition temperature : Not available. **Decomposition temperature** : 540°C (1004°F) Viscosity : Not available. : Not available. Flow time (ISO 2431)

Section 10. Stability and reactivity

: No specific test data related to reactivity available for this product or its ingredients. Reactivity

Chemical stability : The product is stable.

Possibility of hazardous

reactions

: None.

Conditions to avoid : Do not allow hydrated lime to come into contact with incompatible materials, e.g. acids,

> reactive fluoridated compounds, reactive brominated compounds. reactive powdered metals, organic acid anhydrides, nitro-organic compounds, reactive phosphorous

compounds, interhalogenated compounds.

: Reactive or incompatible with the following materials: oxidizing materials and acids. Incompatible materials



Section 10. Stability and reactivity

Hazardous decomposition

: None.

products

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

| Product/ingredient name | Result | Species | Dose | Exposure |
|-------------------------|-----------|---------|------------|----------|
| Calcium Hydroxide | LD50 Oral | Rat | 7340 mg/kg | - |

Irritation/Corrosion

| Product/ingredient name | Result | Species | Score | Exposure | Observation |
|-------------------------|------------------------|---------|-------|----------|-------------|
| Calcium Hydroxide | Eyes - Severe irritant | Rabbit | 8 | 10 mg | - |

Sensitization

There is no data available.

Mutagenicity

There is no data available.

Carcinogenicity

Classification

| Product/ingredient name | OSHA | IARC | NTP |
|---------------------------------------|------|------|---------------------------------|
| Crystalline silica, respirable powder | - | 1 | Known to be a human carcinogen. |

Reproductive toxicity

There is no data available.

Teratogenicity

There is no data available.

Specific target organ toxicity (single exposure)

| Name | Category | Target organs |
|-------------------|------------|------------------------------|
| Calcium Hydroxide | Category 3 | Respiratory tract irritation |

Specific target organ toxicity (repeated exposure)

| Name | Category | Target organs |
|---------------------------------------|------------|-------------------|
| Crystalline silica, respirable powder | Category 1 | respiratory tract |

Aspiration hazard

There is no data available.

Information on the likely routes of exposure

: Dermal contact. Eye contact. Inhalation. Ingestion.

Potential acute health effects

Eye contact : Causes serious eye damage.
Inhalation : May cause respiratory irritation.

Skin contact : Causes skin irritation.

Ingestion : No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics





Section 11. Toxicological information

Eye contact : Adverse symptoms may include the following:

pain watering redness

Inhalation : Adverse symptoms may include the following:

respiratory tract irritation

coughing

burning sensation

Skin contact : Adverse symptoms may include the following:

pain or irritation

redness

blistering may occur

Ingestion : Adverse symptoms may include the following:

burning sensation

abdominal cramps and pain

vomiting

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate

: No known significant effects or critical hazards.

effects

Potential delayed effects

: No known significant effects or critical hazards.

Long term exposure

Potential immediate

effects

: No known significant effects or critical hazards.

Potential delayed effects : No known significant effects or critical hazards.

Potential chronic health effects

General : Causes damage to organs through prolonged or repeated exposure.

Carcinogenicity: May cause cancer if inhaled. Risk of cancer depends on duration and level of exposure.

Mutagenicity : No known significant effects or critical hazards.
 Teratogenicity : No known significant effects or critical hazards.
 Developmental effects : No known significant effects or critical hazards.
 Fertility effects : No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

There is no data available.

Section 12. Ecological information

Toxicity

| Product/ingredient name | Result | Species | Exposure |
|-------------------------|-------------------------------------|--|----------|
| Calcium Hydroxide | Acute LC50 33884.4 µg/L Fresh water | Fish - Clarias gariepinus - Fingerling | 96 hours |

Persistence and degradability

There is no data available.





Section 12. Ecological information

Bioaccumulative potential

There is no data available.

Mobility in soil

Soil/water partition coefficient (Koc)

: Not available.

Other adverse effects

: No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods

: The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling empty containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

| | DOT Classification | TDG Classification | IMDG | IATA |
|-------------------------------|--------------------|--------------------|----------------|----------------|
| UN number | Not regulated. | Not regulated. | Not regulated. | Not regulated. |
| UN proper shipping name | - | - | - | - |
| Transport hazard class(es) | - | - | - | - |
| Packing group | - | - | - | - |
| Environmental hazards | No. | No. | No. | No. |

AERG: Not applicable.

Special precautions for user : Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.





Section 15. Regulatory information

U.S. Federal regulations

: United States inventory (TSCA 8b): All components are listed or exempted.

RCRA classification: Calcium Hydroxide is not listed or classified.

CWA-311: Calcium Hydroxide has been withdrawn from the Clean Water Act (CWA) list

of hazardous subtances. (11/13/79) (44FR65400).

CERCLA: Calcium Hyrdoxide is not listed.

FDA: Calcium Hydroxide has been determined as Generally Recognized As Safe (GRAS)

by FDA. See 21CFR184.1205. (CFR Title 21 Part 184 - - Direct food substances

affirmed as generally recognized as safe).

Clean Air Act Section 112

(b) Hazardous Air

: Not listed

Pollutants (HAPs)

Clean Air Act Section 602 : Not listed

Class I Substances

Clean Air Act Section 602

: Not listed

Class II Substances

DEA List I Chemicals

: Not listed

(Precursor Chemicals)

DEA List II Chemicals (Essential Chemicals)

: Not listed

SARA 302/304

Composition/information on ingredients

No products were found.

SARA 304 RQ

: Not applicable.

SARA 311/312

Classification : SKIN CORROSION/IRRITATION - Category 2

SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1

CARCINOGENICITY (inhalation) - Category 1A

SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract

irritation) - Category 3

SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (respiratory tract) -

Category 1

Composition/information on ingredients

| Name | Classification |
|---------------------------------------|--|
| Calcium Hydroxide | SKIN CORROSION/IRRITATION - Category 2 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3 |
| Crystalline silica, respirable powder | CARCINOGENICITY - Category 1A SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 1 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (respiratory tract) (inhalation) - Category 1 |

SARA 313

There is no data available.

State regulations

Massachusetts : The following components are listed: Calcium Hydroxide; Crystalline silica, quartz

New York : None of the components are listed.

New Jersey : The following components are listed: Calcium Hydroxide; Crystalline silica, quartz

Pennsylvania : The following components are listed: Calcium Hydroxide; Crystalline silica, quartz

California Prop. 65





Section 15. Regulatory information



WARNING: This product can expose you to Crystalline silica, respirable powder, which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

Canadian lists

Canada inventory (DSL

NDSL)

: All components are listed or exempted.

Canadian NPRI : None of the components are listed.

CEPA Toxic substances : None of the components are listed.

Section 16. Other information

Hazardous Material Information System (U.S.A.)

Health: 3 * Flammability: 0 Physical hazards: 1

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings and the associated label are not required on SDSs or products leaving a facility under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered trademark and service mark of the American Coatings Association, Inc.

The customer is responsible for determining the PPE code for this material. For more information on HMIS® Personal Protective Equipment (PPE) codes, consult the HMIS® Implementation Manual.

National Fire Protection Association (U.S.A.)

Health: 3 Flammability: 0 Instability:

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Copyright ©2001, National Fire Protection Association, Quincy, MA 02269. This warning system is intended to be interpreted and applied only by properly trained individuals to identify fire, health and reactivity hazards of chemicals. The user is referred to certain limited number of chemicals with recommended classifications in NFPA 49 and NFPA 325, which would be used as a guideline only. Whether the chemicals are classified by NFPA or not, anyone using the 704 systems to classify chemicals does so at their own risk.

Procedure used to derive the classification

| Classification | Justification |
|--|---|
| SKIN CORROSION/IRRITATION - Category 2 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1 CARCINOGENICITY (inhalation) - Category 1A SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (respiratory tract) - Category 1 | Expert judgment On basis of test data Expert judgment Calculation method Calculation method |

<u>History</u>

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Prepared by : KMK Regulatory Services Inc.

Key to abbreviations : ATE = Acute Toxicity Estimate

BCF = Bioconcentration Factor

GHS = Globally Harmonized System of Classification and Labelling of Chemicals

IATA = International Air Transport Association

IBC = Intermediate Bulk Container

IMDG = International Maritime Dangerous Goods

LogPow = logarithm of the octanol/water partition coefficient

MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as

modified by the Protocol of 1978. ("Marpol" = marine pollution)





Section 16. Other information

UN = United Nations

Notice to reader

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Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

