



CITY OF MANITOWOC

WISCONSIN, USA

www.manitowoc.org



September 7, 2018

18-0934

CONSENT

TO: Mayor and Common Council

FROM: Board of Public Works

SUBJECT: AGMT-18-14 Contract with Pheifer Bros. Constr. Co., Inc.

Dear Mayor and Common Council:

At the September 5, 2018 Board of Public Works meeting, the Board met to approve entering into a contract with Pheifer Bros. Constr. Co., Inc., to seal Broadway Street bridge deck for a contract price of \$12,500.00, AGMT-18-14.

"Moved by City Attorney Kathleen McDaniel, seconded by City Clerk Deborah Neuser, and carried to enter into the contract. Ayes, 7. Nays, none."

Very Truly Yours,

DEBORAH NEUSER
Secretary Board of Public Works

Deborah Neuser, CMC, City Clerk
CITY HALL • 900 Quay Street • Manitowoc, WI 54220-4543
Phone (920) 686-6950 • Fax (920) 686-6959 • dneuser@manitowoc.org

CONTRACT

This contract is made and entered into this 5 day of Sept, 2018 by and between Pheifer Bros. Construction Company, Inc. (hereinafter "Contractor"), located at 599 Bondow Drive, Neenah, Wisconsin 54956 and the City of Manitowoc, Wisconsin, a Wisconsin municipal corporation (hereinafter "City"), located at 900 Quay Street, Manitowoc, Wisconsin 54220.

RECITALS

WHEREAS, Pheifer Bros. Constr. Co., Inc. (hereinafter "Contractor"), located at 599 Bondow Drive, Neenah, Wisconsin 54956 intends to seal cracks in the bridge deck and seal the entire bridge deck (roadway only) of the Broadway Street Bridge as outlined in "Exhibit A", Pheifer Bros. Constr. Co., Inc. Quotation.

WHEREAS, Pheifer Bros. Constr. Co., Inc. has the ability to perform the crack sealing and deck sealing of the Broadway Street Bridge as outlined in "Exhibit A" Pheifer's quotation.

NOW, THEREFORE, in consideration of the mutual covenants and representations of the parties hereinafter set forth, the undersigned parties hereby agree as follows:

1. Recitals. The above recitals are deemed to be true and correct.
2. Scope of Work. The Contractor agrees to perform the following work and/or furnish the following labor and materials in accordance with the terms of this contract:

All work shall be performed in accordance with the City of Manitowoc's Standard Specifications for Public Works Construction.

See listing of tasks for this project. (Attached is "Exhibit A" and it is incorporated into this Contract by reference).

3. Contract Price. The City agrees to pay to the Contractor for the performance of this contract the sum of **\$12,500.00**
4. Schedule. Contractor agrees to commence work under this Contract upon its execution and complete performance of this contract in accordance with the City of Manitowoc's Standard Specifications, which are made part of this Contract and are incorporated by reference. The contract completion date shall be **October 12, 2018**.
5. Payment Schedule. Requests for payment shall be made to the Director of Public Infrastructure, Dan Koski. The Director of Public Infrastructure shall make a recommendation on the payment request. Contractor shall be entitled to payment within 30 days following approval by the Director of Public Infrastructure.

6. Assignment and Subcontracting. Contractor shall not be permitted to sign or subcontract any of the work hereunder without the prior written consent of the City.
7. Insurance and Bonding. Prior to commencing work hereunder, Contractor shall provide City, for approval by the City Attorney, a Certificate of Insurance showing proof of General Liability Insurance in amounts not less \$1,000,000.00 per person per occurrence, \$2,000,000.00 in the aggregate, property damage limits of not less than \$500,000.00 per occurrence, and shall carry the statutory amounts for worker's compensation insurance. **Contractor shall include with the Certificate of Insurance two endorsements, one endorsement naming the City of Manitowoc as an additional insured, and a second endorsement giving City thirty (30) days prior notice of non-renewal, modification or cancellation.**
8. Applicable Statutes. Any provisions of the Wisconsin Statutes, Federal Law or local ordinances applicable to the work performed hereunder are deemed to be incorporated by reference and made a part of this contract.
9. Contract Notice. Per Wisconsin State Statutes 62.15, a Class I Notice had been executed and published for this work on September 4, 2018.
10. Other Indebtedness to City. It is understood and agreed by the parties hereto that whenever a contractor is for any reason indebted to the City of Manitowoc, the contractor consents that the City of Manitowoc through its officials shall and may, deduct and retain, any such balance out of the money or monies which may be due or become due to the contractor under this contract.
11. Indemnify. Contractor shall defend, indemnify and hold harmless the City of Manitowoc, its officials, officers, employees, representatives and agents against any and all liability, claims, costs, demands, losses, damages, expenses and attorney fees of any kind on account of any injury, damage, or death to any person or property that may arise directly caused by or resulting from the work performed under this Contract where the injury, damage, or death is caused by negligence or willful misconduct on the part of the Contractor, subcontractor, officers, employees, or agents.
12. Default. In the event of default or breach in the performance of any of the obligations, covenants, representations or duties under the terms of this Contract by either party, the non-defaulting party shall forward written notice to the defaulting party outlining such default. The defaulting party shall cure such default within thirty (30) days of receiving written notice from non-defaulting party, except that the cure period may be extended to a reasonable time to cure any default that cannot reasonably be cured with the thirty (30) day period, provided that the defaulting party has commenced to cure within the thirty (30) day period and diligently pursues a cure at all times thereafter until the default is cured. The defaulting party shall be responsible for the payment to the non-defaulting party of any outstanding fees, charges or expenses that were incurred by the non-defaulting party on behalf of the defaulting party.
13. Permits. No Permits are anticipated for this project.

14. Termination. Either party may terminate this Contract with ten (10) days written notice to the other party.
15. Notice and Demands. A notice, demand or other communication under this Contract by any party to the other party shall be sufficiently given or delivered and deemed delivered as of the date such notice is delivered to the party intended, if it is dispatched by registered or certified mail, postage prepaid, return receipt requested, or delivered personally and addressed to or personally delivered to:

CITY: City Clerk
900 Quay Street
Manitowoc, WI 54220

CONTRACTOR: Pheifer Bros. Constr. Co., Inc.
599 Bondow Drive
Neenah, WI 54956

Notice and demand given shall be effective only if and when received by the party intended and acknowledged by receipt. The above addresses may be changed at any time by any party by giving written notice in the manner provided above.

16. Assignment. This Contract is not assignable without prior written consent of City.
17. Severability. If any provision of this Contract is deemed by a court of competent jurisdiction to be invalid or unenforceable, the remainder of this Contract shall not be affected thereby, and such remainder would then continue to conform to the requirements of applicable laws.
18. Amendments. This Contract can only be amended or modified in writing and signed by the parties involved.
19. Integration. This Contract represents the entire understanding of the parties as to those matters contained herein. No prior oral or written understanding shall be of any force or effect with respect to matters covered hereunder.
20. Survival of Provisions. All indemnification and hold harmless obligations shall survive the expiration or termination of this Contract.
21. Choice of Law. This Contract shall be governed by and construed in accordance with the laws of the State of Wisconsin. All actions or proceedings relating directly or indirectly, to this Contract, whether sounding in contract or tort, shall be litigated only in the circuit court located in Manitowoc County, Wisconsin. All parties to this Contract hereby subject themselves to the jurisdiction of the circuit court for Manitowoc County, Wisconsin.
22. Heading. The section titles have been inserted in this Contract primarily for convenience, and do not define, limit or construe the contents of such paragraphs. If headings conflict with the text, the text shall control.

23. Remedies Cumulative. All rights and remedies hereunder are cumulative, and not exclusive, and shall be in addition to all other rights and remedies provided by applicable law. Failure to exercise or delay in exercising any right or remedy hereunder shall not operate as a waiver thereof, nor excuse future performance. No waiver discharge or renunciation of any claim or right arising out of a breach of these terms and conditions shall be effective unless in writing signed by the party so waiving. Any waiver of any breach shall be a waiver of that breach only and not of any other breach, whether prior to subsequent thereto.
24. Construction. All parties have contributed to the drafting of this Contract. In the event of a controversy, dispute or contest over the meaning, interpretation, validity of enforcement of this document or any of its terms or conditions, there shall be no inferences, presumption or conclusion drawn whatsoever against any party whatsoever by virtue of that party having drafted the document or any portion thereof.

[THE REMAINDER OF THIS PAGE INTENTIONALLY LEFT BLANK]

IN WITNESS WHEREOF, the parties hereto have made and executed this Contract as of the day and year first above written.

**SOLE PROPRIETORSHIP OR
PARTNERSHIP**

Name of Proprietor or Partnership

Sole Proprietor or Partner (Seal)

Partner (Seal)

Partner (Seal)

CORPORATION

Pheifer Brothers Const. Co., Inc.
Name of Corporation

By: _____ (Seal)
President

Attest: _____
Secretary

CORPORATE SEAL

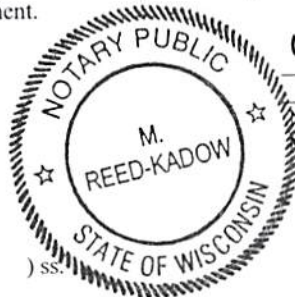
CITY OF MANITOWOC

By: _____
Justin M. Nickels, Mayor

Attest: _____
Deborah Neuser, City Clerk

STATE OF WISCONSIN)
) ss.
MANITOWOC COUNTY)

Personally came before me, this 5 day of September, 2018, the above named Justin M. Nickels and Deborah Neuser, known to me to be the Mayor and City Clerk of the City of Manitowoc and acknowledge they executed the foregoing instrument.

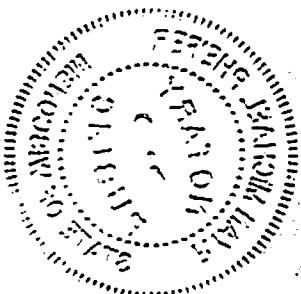


M. Reed-Kadow
Notary Public Manitowoc County, WI
My commission (expires) (is) 8/15/21.

STATE OF WISCONSIN)
) ss.
MANITOWOC COUNTY)

Personally came before me, this 4 day of September, 2018, the above named Michael Pheifer for Pheifer Bros. Construction Company, Inc. and acknowledge they executed the foregoing instrument.

Attorney Ryan Pheifer
Notary Public Manitowoc County, WI
My commission (expires) (is) Permanent.



"Exhibit A"

Greg Minikel

From: Michael Pheifer <mike.pheifer@pheifer.com>
Sent: Sunday, August 26, 2018 1:29 PM
To: Greg Minikel
Cc: Michael Pheifer
Subject: RE: Broadway Street Bridge - Proposal for Sealing Cracks and Sealing the Deck

Greg

Our price for crack and deck sealing is \$12,500.00. We can do it anytime that works for you.
Thanks Mike Pheifer

From: Greg Minikel <gminikel@manitowoc.org>
Sent: Wednesday, July 18, 2018 9:23 AM
To: Michael Pheifer <mike.pheifer@pheifer.com>
Cc: Dan Koski <dkoski@manitowoc.org>
Subject: RE: Broadway Street Bridge - Proposal for Sealing Cracks and Sealing the Deck

Mike,

Does 1 pm or 1:30 pm on Tuesday, July 24th work for you?? Let me know. Thanks.

From: Michael Pheifer [mailto:mike.pheifer@pheifer.com]
Sent: Tuesday, July 17, 2018 6:34 PM
To: Greg Minikel
Cc: Dan Koski
Subject: RE: Broadway Street Bridge - Proposal for Sealing Cracks and Sealing the Deck

Greg
Yes we can do the work I am working on the Hillcrest Rd bridge next week and can take a look at it with you. I can meet any day but Monday
Thanks
Mike

From: Greg Minikel <gminikel@manitowoc.org>
Sent: Thursday, July 12, 2018 2:49 PM
To: Michael Pheifer <mike.pheifer@pheifer.com>; Michael Pheifer <mike.pheifer@pheifer.com>
Cc: Greg Minikel <gminikel@manitowoc.org>; Dan Koski <dkoski@manitowoc.org>
Subject: Broadway Street Bridge - Proposal for Sealing Cracks and Sealing the Deck

Hi Mike,

Does your company perform sealing of cracks and decks for bridges??

We need to have the existing cracks sealed over the three piers on the Broadway St. bridge. This is the same one that you replaced the expansion joint on last fall.

We are also looking to have the entire deck sealed. I do not think that we would seal the sidewalk area at this time.

"A tidink3"

Normally, I have been working with the County on this, but they are too busy this year to do the work. We are going to be detouring a lot of traffic over this bridge in 2019 and 2020, so we were looking to get the work done yet in 2018.

I believe that the County typically was sealing cracks with the Qwickstich material and they seal the entire deck with the Dural 50.

Do you use these same products or something different??

We would like to get a proposal from you for this work.

Call or e-mail me with any questions. Thanks.

Greg Minikel, P.E.
Engineering Division Manager
Dept. of Public Infrastructure
City of Manitowoc
900 Quay Street
Manitowoc, WI 54220
Ph. (920) 686-6910
Cell: (920) 374-0411
E-mail: gminikel@manitowoc.org



EUCO QWIKSTITCH

RAPID-SETTING URETHANE CRACK & SPALL REPAIR

EUCLID CHEMICAL

DESCRIPTION

EUCO QWIKSTITCH is a two-component hybrid urethane repair liquid used to mend cracks in concrete, repair spalled joints and repair damaged or uneven concrete surfaces. **EUCO QWIKSTITCH** is an ultra-low viscosity material formulated to penetrate deep into cracks, mending them back together. Its fast cure time makes quick work of repair jobs; concrete repaired with **EUCO QWIKSTITCH** can be opened to heavy traffic in less than one hour. **EUCO QWIKSTITCH** can be mixed with aggregate to make a tough mortar perfect for quickly repairing pop-outs and spalls. In addition, bulk **EUCO QWIKSTITCH** can be colored with **EUCLID UNIVERSAL COLOR PACKS**.

PRIMARY APPLICATIONS

- Cracked concrete surfaces, interior and exterior
- Spalled floor joints
- Repair of pop-outs and delaminations on floors

FEATURES/BENEFITS

- Can be applied at a range of thicknesses with the use of clean, oven-dried silica
- Very fast cure time
- 33 colors available through the use of color packs
- Static mixers available with needle tips - for neatly injecting very narrow cracks
- Low viscosity - deep penetration into cracks
- Wide application temperature range: 0°F to 110°F (-18°C to 44°C)
- Low VOC and no solvent odor

TECHNICAL INFORMATION

PROPERTY	RESULT
Mix Ratio, Part A to Part B	1:1 by volume
Mix Ratio, sand to mixed liquid	2:1 by volume
Neat color	Part A: Clear/Amber Part B: Black Mixed: Dark Gray/Black
Gel Time at 75°F (24°C)	2 - 3 minutes
Tack Free Time at 75°F (24°C)	10 minutes
Viscosity	Part A: 60 cp Part B: 60 cp Mixed: 60 cp
VOC Content	≤5 g/L
Shore D Hardness ASTM D2240	70
Tensile Strength, 7 days, psi (MPa) ASTM D638	3,830 (28)
Tensile Elongation, % ASTM D638	16.3
Compressive Strength, psi (MPa) ASTM D695	1.5 hour: 4,590 (33) 24 hours: 4,835 (35)
Bond Strength, psi (MPa) ASTM C882	1,847 (12.8)
Water Absorption, % ASTM D570	0.25

Appearance: **EUCO QWIKSTITCH** is initially dark gray/black upon mixing but turns light gray after curing. When used with sand, the final color of the repair will depend on the type, color, and gradation of the sand. Manufactured or colored quartz can be blended on the jobsite to match the color of the floor. Neat **EUCO QWIKSTITCH** is not UV stable and will discolor when exposed to sunlight or interior UV light. Two gal (7.6 L) units can be pigmented through the use of **EUCLID UNIVERSAL COLOR PACKS**, which are available in 33 standard colors.

SPECIFICATIONS/COMPLIANCES

Suitable for use in USDA and Canadian Food Inspection Agency inspected facilities

PACKAGING

EUCO QWIKstitch is packaged in cases of (12) 20 oz (0.59 L) dual cartridges with static mixers and retaining nuts included. Needle tip static mixers are available separately, in packages of 5. EUCO QWIKstitch is also available in 2 gal (7.6 L) bulk units consisting of 1 gal (3.8 L) Part A and 1 gal (3.8 L) Part B.

COVERAGE/YIELD (NEAT)

20 oz (0.59 L) cartridge: 33 in³ (540 cm³)

2 gal (7.6 L) bulk unit: 462 in³ (7577 cm³)

SHELF LIFE

1 year in original, unopened containers

DIRECTIONS FOR USE

Surface Preparation: All dirt, oil, dust, foreign contaminants, and laitance must be removed to assure a good bond to the concrete. For repair of spalled concrete or pop-outs, a stiff wire brush or twisted wire wheel on a grinder can be used to remove all loose or unsound concrete. Cracks should be similarly cleaned with a diamond blade saw, wire brush or wire wheel. After preparing area, remove all dust and debris with an industrial vacuum and oil-free compressed air. All surfaces must be clean and dry before installation of QWIKstitch.

Environment: Condition EUCO QWIKstitch to room temperature, 60°F to 80°F (16°C to 27°C) before using. Any sand used with the product must be dry and kept at room temperature. Warmer material and/or application on hot concrete or in a warm environment will accelerate curing of EUCO QWIKstitch. Cold material, cold concrete, or application in a cold environment will delay curing. Heat cold concrete to remove any visible frost before application of EUCO QWIKstitch.

Readying Cartridges: Cartridges of EUCO QWIKstitch must be shaken well before using. After shaking, let cartridge stand for one minute to allow any entrapped air to disperse. Insert cartridge into a dual component, 300 ml x 300ml manual dispenser with a 1:1 mix ratio. Open the cartridge by first removing the clear retaining nut. After removing the retaining nut, remove the red plug. Save the retaining nut and plug; they can be re-inserted to save a partially used cartridge. Hold cartridge at a slightly upward angle and slowly dispense a small amount of material into a disposable container until both materials flow evenly from cartridge. Continue to hold cartridge & gun at an upward angle and install flow control and mixing nozzle onto cartridge. Next, point mixing nozzle straight up and slowly begin gunning material through the mixing nozzle until it reaches the tip. Point upwards at a 45° angle and dispense one stroke into a disposable container.

Crack/Spall Repair, Cartridges: Gun EUCO QWIKstitch directly into cracks, allowing adhesive to penetrate into the crack and top-off as needed. Kiln-dried medium grade (30 mesh) silica sand or dry floor grindings can be sprinkled on top of the wet EUCO QWIKstitch to add texture and closely match the appearance of the surrounding concrete. Alternately, larger cracks can be filled with dry, medium grade silica sand then saturated with EUCO QWIKstitch. Keep EUCO QWIKstitch flowing to prevent material from hardening in the nozzle. Mixed EUCO QWIKstitch will be tack-free in 10 minutes at 75°F (24°C). Excess material may be removed immediately or within 20 to 30 minutes after installation by scraping/shaving with a sharp blade. If necessary, cured EUCO QWIKstitch can be ground smooth with a brick rub or hand grinder approximately one hour after application.

Crack/Spall Repair, 2 gal (7.6 L) unit: EUCO QWIKstitch can be mixed with kiln dried medium grade (30 mesh) silica sand to create a mortar suitable for repairs ½ inch to 3 inches (1.3 to 7.6 cm) in thickness per lift. EUCO QWIKstitch mortars must be mixed, placed, and finished in less than 3 minutes, so only prepare an amount of EUCO QWIKstitch mortar that can be mixed and placed within that time. Thoroughly but quickly, mix Part A with Part B with a "Jiffy" mixing blade and drill at low speed for 20 seconds maximum. While one person is mixing A & B, have a second person swiftly add the sand at a ratio of 2 parts sand to one part mixed EUCO QWIKstitch, by volume. Make sure all sand is saturated and there are no clumps of dry sand remaining. Scrape bottom and sides of pail to assure good mix. Place and finish immediately.

Euclid Universal Color Packs: 2 gal (7.6 L) units of EUCO QWIKstitch can be colored using 1 EUCLID UNIVERSAL COLOR PACK (EUCO Pack) per unit. Prior to mixing the unit together with aggregate, stir 1 color pack into the part "A" side of the product until it is fully dispersed. Proceed with mixing as stated above. EUCLID UNIVERSAL COLOR PACKS are available in 33 standard colors, see EUCLID UNIVERSAL COLOR CHART for available colors. **NOTE:** EUCO QWIKstitch cures very rapidly. For this reason, do not allow mixed material to stop flowing for more than 3 minutes. If EUCO QWIKstitch cures inside the cartridge static mixer, remove cartridge from dispenser and replace mixer.

CLEAN-UP

Tools, equipment and general clean-up can be done before the product cures with MEK or acetone.

PRECAUTIONS/LIMITATIONS

- Wet substrates or wet sand can cause foaming of the EUCO QWIKstitch and result in a low strength, less durable repair.
- When used without sand, EUCO QWIKstitch will discolor when exposed to UV light.
- In all cases, consult the Safety Data Sheet before use.

Rev. 07.18

WARRANTY: The Euclid Chemical Company ("Euclid") solely and expressly warrants that its products shall be free from defects in materials and workmanship for one (1) year from the date of purchase. Unless authorized in writing by an officer of Euclid, no other representations or statements made by Euclid or its representatives, in writing or orally, shall alter this warranty. EUCLID MAKES NO WARRANTIES, IMPLIED OR OTHERWISE, AS TO THE MERCHANTABILITY OR FITNESS FOR ORDINARY OR PARTICULAR PURPOSES OF ITS PRODUCTS AND EXCLUDES THE SAME. If any Euclid product fails to conform with this warranty, Euclid will replace the product at no cost to Buyer. Replacement of any product shall be the sole and exclusive remedy available and buyer shall have no claim for incidental or consequential damages. Any warranty claim must be made within one (1) year from the date of the claimed breach. Euclid does not authorize anyone on its behalf to make any written or oral statements which in any way alter Euclid's installation information or instructions in its product literature or on its packaging labels. Any installation of Euclid products which fails to conform with such installation information or instructions shall void this warranty. Product demonstrations, if any, are done for illustrative purposes only and do not constitute a warranty or warranty alteration of any kind. Buyer shall be solely responsible for determining the suitability of Euclid's products for the Buyer's intended purposes.

Concrete Protective Surface Treatment

Date last edited: 6/10/2014

Product Name	Manufacturer	Date Approved
SIL-ACT ATS-42 NS	Advanced Chemical Technologies Inc 9608 Robison Ave Oklahoma City OK 73114	7/31/2013
Chemtrete BSM 40 VOC	Degussa Aerosil and Silanes 379 Interpace Parkway Parsippany NJ 07054-0677	12/1/2006
Penseal 244 40%	Vexcon Chemical	** Pre-1999
Hydrozo Enviroseal 40	ChemRex, Inc.	** Pre-1999
Hydrozo Silane 40 VOC	ChemRex, Inc.	3/16/2001
Masterseal SL40 VOC	ChemRex, Inc.	12/30/2002
Aquanll Plus 40	Chemmasters	3/16/2001
Baracade Silane 40 ⁽¹⁾	The Euclid Chemical Company ⁽¹⁾ 19218 Redwood Road Cleveland, Ohio 441100 800-321-7628 http://www.euclidchemical.com/	4/18/2003
TK-590-1 MS	TK Products	4/26/2007
TK-590-90	TK Products	6/10/2014
Powerseal 40%	Vexcon Chemical	**Pre-1999
Silane Sealer Plus	Universal Form Clamp Co 840 S 25th Ave Bellwood IL 60104	12/1/2006
Sonneborn Penetrating Sealer 40 VOC	ChemRex, Inc.	12/30/2002

** Approval date will be recorded when new products are added to the existing list.

(1) Formerly Tamms Industries

Contact:
John Rublein
E-mail:
john.rublein@dot.wi.gov



VEXCON
CHEMICALS, INC.

888-839-2661 | sales@vexcon.com | 7240 State Road | Philadelphia, PA 19135 **vexcon.com**

Batch Certification – Certi-Vex Penseal 244 40%

Batch Number – 37775

Date of Manufacture – May 2018

Quantity – 5 Drums

Issued/Shipped to – Bay Verte

P.O. No. – 74238

Ship Date – May 9 2018

To Whom It May Concern,

Vexcon Chemicals hereby certifies that Certi-Vex Penseal 244 40% is listed on the
Wisconsin DOT Approved Product List as a Concrete Protective Surface Treatment and
is approved for use on Wisconsin DOT projects.

Sincerely

Clifford Platt

Clifford Platt
Vice President
Vexcon Chemicals
7240 State Rd.
Philadelphia, PA 19135
215-332-7709
888-839-2661
ciplatt@vexcon.com



VEXCON

CHEMICALS, INC.

888-839-2641 • sales@vexcon.com • 7240 State Road • Philadelphia, PA 19135 • VEXCON.COM

CERTI-VEX® PENSEAL 244 40%

WATER REPELLENT PENETRATING SEALER • BEST PROTECTION

DESCRIPTION

CERTI-VEX PENSEAL 244 40% is a premium high solids solvent base breathable clear water repellent sealer that penetrates into new (14 day minimum) or existing concrete and masonry surfaces. Surfaces treated with Certi-Vex Penseal 244 40% have a totally natural appearance.

Certi-Vex Penseal 244 40% prevents the penetration of water, salts, and deicing chemicals, which often result in efflorescence, mildew growth, corrosion, scaling, spalling, surface erosion and other costly damage to concrete and masonry surfaces.

Certi-Vex Penseal 244 40% penetrates into the pores and capillaries of the cement based materials reacting with the moisture and chemicals in the substrate, polymerizing and sealing the pores, which prevents water and chloride ION penetration. Treatment of reinforced concrete reduces surface erosion and corrosion of rebar caused by attack of water and water borne salts and alkalis.

BENEFITS

- Extends the life of concrete and masonry
- Best long term protection against salt corrosion, deicing chemicals, mildew, water, wind driven rain, airborne contaminants, surface spalling from freeze/thaw cycles and other severe weather conditions
- Reduces corrosion of rebar and surface erosion in reinforced concrete
- Breathable - Prevents damage from within by maintaining vapor permeability of substrate
- Superior water repellency
- No masking of windows necessary
- Can be applied to damp surfaces
- Suitable for alkaline concrete surfaces
- Reduces on-going maintenance and repair costs
- Does not alter natural surface texture or appearance
- Keeps surface cleaner
- Apply to temperatures as low as 20°F (-6° C)

RECOMMENDED FOR

Transportation, commercial, industrial, distribution and institutional structures.

- | | |
|--------------------------|--|
| • Pre-cast concrete | • Parking decks |
| • Balconies | • Concrete ramps |
| • Cast-in-place concrete | • Median barriers |
| • Tunnel walls | • Building Facades |
| • Brick walls | • Other reinforced concrete structures |
| • Bridge decks | |

SHORT SPECIFICATION

07 19 16: VOC compliant water repellent. Meets or exceeds NCHRP 244 Series IV test, reducing water and salt penetration by minimum 90%. Ten year warranty. Manufactured by Vexcon Chemicals.

CURING RECOMMENDATIONS

- A. Concrete can be cured with Certi-Vex Envlo Cure, an emulsion resin cure, which will dissipate. Allow to dissipate or remove with Certi-Vex Concrete Stripper.
- B. Wet Cure

PRE-INSTALLATION NOTES

Precaution: Product contains blended solvent and should be handled accordingly. Do not use near fire or extreme heat and provide good ventilation to avoid buildup of solvent fumes. Applicators should wear NIOSH/MSHA approved respirators. When applying to the exteriors of occupied buildings all exterior air conditioning vents should be covered during application and air-handling equipment should be turned off during application to avoid solvent odors within the building.

- A test application should be performed on each surface to be treated to ensure compatibility and desired water repellency. Test areas are also useful in determining final application rate and application procedures.
- Following instructions below tests should be applied using the same equipment and techniques planned for job application.
- If a tacky residue remains after 24 hrs, the application rate must be modified. Material which remains tacky on the surface can usually be removed by washing with water or a vinegar solution.

SURFACE PREPARATION

- All caulking, patching and water base joint sealants should be installed and fully cured prior to application. Hot poured and solvent based joint sealants maybe applied before or after application of the sealer. Concrete should be properly cured, see Curing
- All surfaces to be sealed must be properly cleaned. As needed, power wash surface clean of dust and construction dirt. Use Vexcon's New Construction & Restoration Cleaners to clean surface materials, previous coatings, atmospheric stains and other harder to clean contaminants.
- Surfaces to be treated may be damp but should be absorbent to assure good penetration.
- To determine that the concrete is absorbent perform a water absorbency test by applying water to a representative portion of the prepared surface. A properly prepared surface when dry will immediately absorb clean water without any surface beading effects.
- To improve absorbency, perform a mild chemical etch using Certi-Vex Etch and Efflorescence Remover & StarSeal Neutralizing Rinse or by mechanical means (shot, sand blasting or high power wash)

APPLICATION

- Do not dilute
- Application to still damp surfaces is acceptable however free standing water must be removed.
- Apply with low-pressure (20-PSI) airless industrial spray equipment. Sprayer should be fitted with solvent resistant hoses and gaskets.
- If using brushes or rollers care should be taken to ensure that enough solution is applied.
- Apply in a single saturating application with sufficient material applied so the surface remains wet for a few minutes before penetration into the surface.
- Surface residues, pools and puddles should be broomed or brushed out until they completely penetrate into the surface.
- Protect from vehicular traffic until the surface is dry.

HORIZONTAL SURFACES

- Apply in a single saturating application with sufficient material applied so the surface remains wet for a few minutes before penetration into the surface.
- Surface residues, pools and puddles should be broomed or brushed out until they completely penetrate into the surface.

VERTICAL SURFACES

- Certi-Vex Penscal 244 40% should be applied and absorbed on the substrate to the specified coverage rate.
- In the case of extremely dense, mirror finish architectural concrete and similar surfaces, it may be necessary to restrict the amount of material by first applying a light mist coat by the procedure listed below in order to prevent surface darkening.
- Allow the mist coat to penetrate the surface (approximately 3-5 minutes) and apply in the same saturation manner.
- Apply in a flooding application, from the bottom up with sufficient material applied to provide a 6" to 8" run down below the contact point of the new spray pattern with the surface.

SPECIFICATION/COMPLIANCE

- Many state departments of transportation
- VOC - <600 grams/liter or <5.00 #/gal
Meets:
US EPA - Waterproofing Sealers and Treatments
NCHRP 244 Series II & IV
Reduction of Absorbed Chloride into Concrete
Series II - 93%
Series IV - 94%
- NCHRP 244 Series II Water Weight Gain % Reduction - 87%
- ASTM C672 Scale rating -100 freeze thaw cycles -0 (no scaling)
- Penetration (1 application) 0.150 - 0.26", depending on substrates
- ASTM E96 - Water Vapor Permeability 95%
- ASTM D2047 - Coefficient of friction 0.84 average - minimum required 0.50
- ASTM C642 - Water Absorption Reduction in Hardened Concrete >98%
- CSI reference: 07 19 16

PHYSICAL PROPERTIES

- Color Clear
 - Dry time <2.5 hours
 - Total solids and active silane (by wt) >40%
- Dry times are based upon 68-77°F (20-25°C) at 50% RH. Lower temperatures and the relative humidity will extend dry times.

PACKAGING

Available in 55-gallon drums and 5-gallon pails. Contact Vexcon directly to discuss your customized packaging requirements.

HEALTH AND SAFETY

- Use only with adequate ventilation.
 - Use of gloves, goggles and other protective clothing is advised when using this product.
 - If swallowed, do not induce vomiting.
 - Use of respirators is advised when using in confined areas.
- Vexcon SDS PS106 is an integral part of the safety and application of our product. A short synopsis is provided in this product data sheet. Before using this Vexcon product it is advisable to obtain a copy of the SDS from your distributor or at vexcon.com.

SPECIAL NOTES

- The product should be stored in sealed containers and kept away from extreme heat.
- Do not apply unless substrate and ambient temperatures are 20°F (-6°C) and rising at installation time and remain above 40°F (4°C) for at least 4 hours after installation.
- Do not apply above 90°F (32°C) or below 20°F (-6°C).
- Do not apply in rain or when rain is expected within 4 hours after application.
- Do not apply water repellent treatment on windy days.
- Protect plant life and landscaping from overspray.
- Line stripping can be done after application of sealer. Contact Vexcon Technical Service for additional information.
- Inadvertent overspray should be immediately rinsed with water. If allowed to dry, clean with Certi-Vex Equipment Cleaner.
- Protect non-porous surfaces. Protect from spillage or overspray, specialty coated glass, plastic windows, bituminous roofing products and asphalt. Check compatibility before application.
- It is the responsibility of contractor/applicator to determine when the substrate is dry enough to safely open to traffic.
- Shelf Life: If properly stored in its original sealed container, 3 years from date of manufacture. Rotate your stock.
- For use by experienced contractors.
- Storage/ Handling: Store in tightly sealed original factory container. Keep from freezing and exposure to moisture. Store at room temperature prior to use. Care should be taken to keep dirt, water and contaminants away from the opening of containers.
- Delivery: Deliver materials to site in manufacturer's original, unopened containers and packaging, with labels clearly identifying product name and manufacturer.
- Proper application of Vexcon material is the responsibility of the installer or user. Telephone consultation and/or field visits by Vexcon personnel are for the sole purpose of making technical recommendations only, and not for providing quality control or supervision on location.

COVERAGE RATES/ESTIMATING

The following is a guide for estimating material requirements. Actual coverage rates can vary based on substrate or transportation authority requirements.

Horizontal	
Broom Finish Concrete	125 - 140 sq.ft./gal. (3.1-3.5m ² /L)
Smooth Hard Troweled Concrete	200 - 400 sq.ft./gal. (6.5-11m ² /L)
Bridge Decks/Ramps	125 - 250 sq.ft./gal. (3.1 - 8.1 m ² /L)
Resealing Bridge Decks/Ramps	250 - 300 sq.ft./gal. (8.1 - 9.2 m ² /L)
Concrete Pavers	120- 140 sq.ft./gal. (3.1-3.5m ² /L)
Brick	200 - 250 sq.ft./gal. (6.5m ² /L)
Vertical	
CIP or Precast Concrete	150 - 200 sq.ft./gal. (3.5-5m ² /L)
Un-Painted Stucco	95 - 140 sq.ft./gal. (2.4-3.5m ² /L)
Brick	200 - 400 sq.ft./gal. (6.5-11m ² /L)
Smooth Faced Block	200 - 400 sq.ft./gal. (6.5-11m ² /L)

CONTACT US @

Additional product information, technical assistance and customer service is available by contacting Vexcon Chemicals directly or our distributors.

- vexcon.com
- techservice@vexcon.com
- customerservice@vexcon.com
- sales@vexcon.com
- Voice: 888.839.2661
- Fax: 215.332.9997

WARRANTY

LIMITED WARRANTY: Vexcon warrants for a period of one (1) year from the date of manufacture that the goods supplied hereunder shall be of its standard quality and free of defects, and conform to (a) Vexcon's published specifications in force on the date of acceptance by Vexcon of the order and (b) the sample which has been made available for testing by buyer prior to sale. Any claim under this warranty must be made in writing to Vexcon Chemicals within sixty (60) days after such non-conformity is first discovered. As the EXCLUSIVE REMEDY for any breach of this Limited Warranty, Vexcon at its option shall replace nonconforming goods or refund the purchase price. Some methods of use and application are beyond Vexcon's control. This Limited Warranty is in full of all other warranties expressed or implied, including, but not limited to, those concerning MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. THIS LIMITED WARRANTY IS ALSO IN LIEU OF ANY OTHER POSSIBLE WARRANTIES OF VEXCON, WHETHER ALLEGED TO ARISE BY AGREEMENT OR BY OPERATION OF LAW, RESPECTING THE SALE, APPLICATION, USE OR FUNCTION OF VEXCON'S PRODUCTS, INCLUDING BUT NOT LIMITED TO CLAIMS OF NEGLIGENCE, STRICT LIABILITY, MISFEASANCE, MISAPPROPRIATION, ACCIDENT, STRICT LIABILITY OR ANY OTHER TORT. No person is authorized by Vexcon to assume for it any other liability of any kind in connection with the sale or use of products manufactured or sold by it, and there are no oral agreements or warranties collateral to or affecting any sale or use. All of the foregoing arises under the substantive law of Pennsylvania without regard to principles of conflicts of laws.

LIMITATION OF LIABILITY: IN ALL EVENTS VEXCON'S LIABILITY SHALL BE LIMITED TO THE PURCHASE PRICE OF PURCHASED PRODUCTS. IN NO EVENT SHALL VEXCON BE LIABLE FOR PERSONAL INJURY OR PROPERTY DAMAGE, REAL OR PERSONAL, ATTRIBUTED TO ITS PRODUCTS, NOR FOR ANY EXCAVATION, REMOVAL, REAPPLICATION, DOWN TIMES, CLEANUP, LOSS OF USE, LOSS OF OPPORTUNITY, LOSS OF MARKET VALUE, LOSS OF RENTAL VALUE OR FOR ANY LOSS OF PROFITS OR OTHER SPECIAL, INCIDENTAL, RESULTING, CONSEQUENTIAL OR EXEMPLARY DAMAGES.



VEXCON

CHEMICALS, INC.

858-839-2661 | sales@vexcon.com | 7240 State Road | Philadelphia, PA 19135 | vexcon.com

HAZARD RATING
4=EXTREME
3=HIGH
2=MODERATE
1=SLIGHT
0=INSIGNIFICANT

HEALTH	2
FLAMMABILITY	2
REACTIVITY	1

SAFETY DATA SHEET
VEXCON NO. PS106

CERTI-VEX PENSEAL 244 40%

SECTION I - GENERAL INFORMATION

PRODUCT IDENTIFICATION: CERTI-VEX PENSEAL 244 40%	
VOC CONTENT:	<600 GR/ LITER OR <5.00 #/GAL
CATEGORY:	WATERPROOFING CONCRETE/MASONRY SEALER
COMMON NAME:	SILANE/SILOXANE WATERPROOFER
MANUFACTURER:	VEXCON CHEMICALS, INC
ADDRESS:	7240 STATE RD, PHILADELPHIA, PA 19135
EMERGENCY NO.:	800.858.2828 (PolySat Inc)
TELEPHONE NO.:	215.332.7709 (Vexcon)
CHEMTREC NO.:	800.424.9300 (CCN# 23822)
PREPARED:	AUGUST 1997
UPDATED:	AUGUST 2014
PREPARED BY:	DARRY F. MANUEL, PRESIDENT

SECTION II - HAZARD IDENTIFICATION

DOT SHIPPING NAME:

UN ID NUMBER / SHIPPING NAME / HAZARD CLASS / PKG GROUP
IN CONTAINERS LESS THAN 119 GALS BY GROUND:
(NON-REGULATED)

IN CONTAINERS GREATER THAN 119 GALS BY
GROUND:

**UN 1993, FLAMMABLE LIQUID N.O.S.
(STODDARD SOLVENT, ALKOXYLSILANE), 3,
PGIII**



FOR LIMITED QUANTITY AIR & OCEAN

SHIPMENT:

**UN 1993, FLAMMABLE LIQUID N.O.S. (STODDARD SOLVENT,
ALKOXYLSILANE), 3, PGIII. LIMITED QUANTITY**

LTD QTY Limits:

Passenger Air Limit 60L (15.8gal);
Cargo Air Limit 220L (58.1gal)

HEALTH AND SAFETY: FLAMMABLE LIQUID: USE ONLY WITH
ADEQUATE VENTILATION: IF SWALLOWED, DO NOT INDUCE
VOMITING: USE OF SOLVENT RESISTANT GLOVES, GOGGLES AND
OTHER PROTECTIVE EQUIPMENT IS ADVISED WHEN HANDLING THIS
PRODUCT: ASPIRATION OF MATERIAL INTO THE LUNGS CAN CAUSE
CHEMICAL PNEUMONITIS WHICH CAN BE FATAL: USE OF
RESPIRATORS IS ADVISED WHEN USING PRODUCT IN CONFINED
AREA.



SECTION III HAZARDOUS INGREDIENTS

MATERIAL OR COMPONENTS	CAS NO.	%	HAZARD DATA	UN#
SILANE	2943-75-1	40-50%	CAN FORM ETHYL ALCOHOL UPON HYDROLYSIS ETHYL ALCOHOL OSHA PEL AND ACGIH TLV: 1000 ppm TWA	1993
STODDARD SOLVENT	8052-41-3	50-60%	ACGIH TLV: 100 ppm, 525 mg/m3 (TWA) OSHA PEL: 500 ppm, 2900 mg/m3 (TWA) NIOSH REL: 350 mg/m3 (TWA)	1268

SECTION IV FIRST AID MEASURES

HEALTH HAZARD DATA HAZARD CLASSIFICATION BASIS FOR CLASSIFICATION SOURCE

ROUTES OF EXPOSURE:

INHALATION:	THIS PRODUCT MAY CREATE BREATHING DIFFICULTIES. DIZZINESS, LIGHTEADEDNESS WHEN WORKING IN AREAS WITH HIGH VAPOR CONCENTRATION. STODDARD SOLVENT COMPONENT
SKIN CONTACT:	THIS PRODUCT MAY CAUSE SKIN IRRITATION UPON PROLONGED OR REPEATED CONTACT. STODDARD SOLVENT COMPONENT.
SKIN ABSORPTION:	THIS PRODUCT MAY CAUSE SKIN IRRITATION UPON PROLONGED OR REPEATED CONTACT. STODDARD SOLVENT COMPONENT.
EYE CONTACT:	THIS PRODUCT MAY BE AN EYE IRRITANT.
INGESTION / INHALATION:	SMALL AMOUNTS OF LIQUID ASPIRATED INTO THE RESPIRATORY SYSTEM DURING INGESTION, OR FROM VOMITING, MAY CAUSE BRONCHOPNEUMONIA OR PULMONARY EDEMA. DO NOT INDUCE VOMITING. SEEK IMMEDIATE MEDICAL ATTENTION.
EFFECTS OF OVEREXPOSURE:	TLV 100 ppm STODDARD SOLVENT ANESTHESIA, HEADACHE, NAUSEA, DIZZINESS. LIQUIDS MODERATELY IRRITATING ON SKIN AND EYES.
ACUTE OVEREXPOSURE:	ANESTHESIA, HEADACHE, NAUSEA, DIZZINESS: MODERATE IRRITATION BY LIQUID TO SKIN AND EYES. PROLONGED CONTACT ON THE SKIN WILL CLAY AND DEFEAT THE SKIN POSSIBLY CAUSING DERMATITIS.
NOTE ABOUT MINERAL SPIRITS OR STODDARD SOLVENT:	NOTE: THE THRESHOLD LIMIT VALUE (TLV) OF 100 ppm VAPOR IN AIR HAS BEEN ESTABLISHED BY THE AMERICAN CONFERENCE OF GOVERNMENTAL INDUSTRIAL HYGIENISTS FOR STODDARD SOLVENT AND IS THUS APPLICABLE TO MINERAL SPIRITS. IN A STUDY OF EXXON CORP. MEDICAL RESEARCH WITH LABORATORY ANIMALS (RATS) EXPOSED TO VAPORS IN AIR OF A SOLVENT SIMILAR TO MINERAL SPIRITS, KIDNEY DAMAGE WAS NOTED IN MALE RATS AT THIS CONCENTRATION. THE RECENT STUDY SUGGESTS THAT THIS OCCUPATIONAL EXPOSURE LIMIT MAY HAVE TO BE LOWERED FOR THIS PRODUCT. WORK IS CONTINUING TO VALIDATE THESE FINDINGS AND WHETHER A REVISED OCCUPATIONAL EXPOSURE LIMIT SHOULD BE RECOMMENDED FOR MINERAL SPIRITS.

EMERGENCY AND FIRST AID PROCEDURES:

<p>VENTILATION REQUIREMENTS: LOCAL MECHANICAL VENTILATION MAY BE SUFFICIENT TO KEEP PRODUCT VAPOR CONCENTRATIONS WITHIN SPECIFIED TIME-WEIGHTED TLV RANGES. IF LOCAL VENTILATION PROVES INADEQUATE TO MAINTAIN SAFE VAPOR CONCENTRATIONS, SUPPLEMENTAL LOCAL EXHAUST MAY BE REQUIRED. OTHER SPECIAL PRECAUTIONS SUCH AS RESPIRATORY MASKS OR ENVIRONMENTAL CONTAMINANT DEVICES MAY BE REQUIRED IN EXTREME CASES.</p>	<p>RESPIRATORY PROTECTION: THE USE OF RESPIRATORY PROTECTION DEPENDS ON VAPOR CONCENTRATION ABOVE THE TIME WEIGHTED TLV. USE OF OSHA APPROVED CARTRIDGE RESPIRATOR OR GAS MASK OR AIR-PACK CHEMICAL CARTRIDGE RESPIRATOR, HALF MASK OR ORGANIC VAPOR CARTRIDGE, FULL FACE ORGANIC VAPOR CARTRIDGE IF EYE PROTECTION IS NEEDED.</p>	<p>EYES: CHEMICAL GOGGLES AND/OR FACE SHIELD ARE RECOMMENDED TO SAFEGUARD AGAINST POTENTIAL EYE CONTACT, IRRITATION OR INJURY.</p> <p>GLOVES: THE USE OF IMPERMEABLE GLOVES IS ADVISED TO PREVENT SKIN IRRITATION IN SENSITIVE INDIVIDUALS. IMPERVIOUS GLOVES, (CHEMICAL RESISTANT) SUCH AS NEOPRENE, LATEX OR PVA.</p> <p>OTHER CLOTHING AND EQUIPMENT: TO PREVENT BODY CONTACT, IMPERVIOUS CLOTHING AND BOOTS ARE RECOMMENDED. IMPERVIOUS APRONS AND HELMETS (HEAD COVER) ARE RECOMMENDED WHEN WORKING WITH THIS PRODUCT. THE AVAILABILITY OF EYE WASHES AND SAFETY SHOWERS IN WORK AREAS IS RECOMMENDED.</p>
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SECTION VIII EXPOSURE CONTROLS / PERSONAL PROTECTION

<p>PRECAUTIONARY STATEMENTS: PERSONNEL SHOULD AVOID INHALATION OF VAPORS. PERSONAL CONTACT WITH THE PRODUCT SHOULD BE AVOIDED. SHOULD CONTACT BE MADE, REMOVE SATURATED APPAREL AND FLUSH AFFECTED BODY AREAS WITH WATER. CLOTHING MUST BE WASHED AND DRIED BEFORE REUSE. CONTAINERS OF THIS MATERIAL MAY BE HAZARDOUS WHEN EMPLOYED SINCE EMPLOYED CONTAINERS RETAIN PRODUCT RESIDUE (VAPOR, LIQUID AND/OR SOLID). ALL HAZARD PRECAUTIONS GIVEN IN THIS DATA SHEET MUST BE OBSERVED.</p>	<p>FIRE FIGHTING: WATER MAY BE UNSUITABLE AS AN EXTINGUISHING MEDIUM BUT HELPFUL IN KEEPING ADJACENT CONTAINERS COOL. AVOID SPREADING BURNING LIQUID WITH WATER USED FOR COOLING PURPOSES. PERSONNEL SHOULD AVOID INHALATION OF VAPORS.</p> <p>OTHER HANDLING AND STORAGE REQUIREMENTS: STORE AND USE IN WELL VENTILATED AREA, EQUIVALENT TO FRESH AIR. KEEP CONTAINER TIGHTLY CLOSED. DO NOT STORE WITH INCOMPATIBLE MATERIALS. STORE IN ACCORDANCE WITH FEDERAL, STATE, AND LOCAL REGULATIONS. DO NOT STORE OR CONSUME FOOD, DRINK, OR TOBACCO IN AREAS WHERE THEY MAY BECOME CONTAMINATED WITH THIS MATERIAL. KEEP AWAY FROM HIGH TEMPERATURES, OPEN FLAMES, SPARKS, SOURCES OF IGNITION, ETC. USE WITH EXPLOSION PROOF EQUIPMENT IS HIGHLY ADVISABLE.</p>
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SECTION VII HANDLING AND STORAGE

<p>STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED: LAND SPILL: ELIMINATE SOURCES OF IGNITION. PREVENT ADDITIONAL DISCHARGE OF MATERIAL. IF POSSIBLE TO DO SO WITHOUT HAZARD FOR SMALL SPILLS, IMPLEMENT CLEANUP PROCEDURES. FOR LARGE SPILL, IMPLEMENT CLEANUP PROCEDURES AND, IF IN PUBLIC AREA, KEEP PUBLIC AWAY AND ADVISE AUTHORITIES. ALSO, IF THIS PRODUCT IS SUBJECT TO CERCLA REPORTING NOTIFY THE NATIONAL RESPONSE CENTER. PREVENT LIQUID FROM ENTERING SEWERS, WATERCOURSES, OR LOW AREAS. CONTAIN SPILLED LIQUID WITH SAND OR EARTH. DO NOT USE COMBUSTIBLE MATERIALS SUCH AS SAWDUST. RECOVER BY PUMPING (USE AN EXPLOSION PROOF OR HAND PUMP) OR WITH A SUITABLE ABSORBENT. CONSULT AN EXPERT ON DISPOSAL OF RECOVERED MATERIAL AND ENSURE CONFORMITY TO EPA, FEDERAL, STATE, AND LOCAL DISPOSAL REGULATIONS.</p> <p>WATER SPILL: REMOVE FROM SURFACE BY SKIMMING OR WITH SUITABLE ABSORBENTS. IF ALLOWED BY LOCAL AUTHORITIES AND ENVIRONMENTAL AGENCIES, SINKING AND/OR SUITABLE DISPERSANTS MAY BE USED IN NON-CONTAINED WATERS. CONSULT AN EXPERT ON DISPOSAL OF RECOVERED MATERIAL AND ENSURE CONFORMITY TO EPA, FEDERAL, STATE, AND LOCAL DISPOSAL REGULATIONS.</p>	<p>AQUATIC TOXICITY (E.G., 96 HR. TLM): DO NOT DISCHARGE THIS PRODUCT INTO PUBLIC WATERS OR WATERWAYS UNLESS AUTHORIZED BY A NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT ISSUED BY THE ENVIRONMENTAL PROTECTION AGENCY (EPA).</p>
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SECTION VI ACCIDENTAL RELEASE MEASURES

<p>UNUSUAL FIRE AND EXPLOSION HAZARD:</p> <p>THIS PRODUCT IS FLAMMABLE AND EXPLOSIVE UNDER NORMAL CONDITIONS IN THE PRESENCE OF FLAME OR SPARK SOURCE. FLAMMABLE VAPORS MAY ACCUMULATE IN THE CONTAINER HEADSPACE ON FORMATION OF HYDROLYSIS BY-PRODUCTS. IF STORAGE CONTAINERS ARE EXPOSED TO EXCESSIVE HEAT, OVER PRESSURIZATION OF THE CONTAINERS CAN RESULT. VAPOR IS HEAVIER THAN AIR AND MAY TRAVEL ALONG THE GROUND OR THROUGH VENTILATION SYSTEM CONSIDERABLE DISTANCE TO A SOURCE OF IGNITION AND FLASH BACK.</p> <p>KEEP WORK AREAS FREE OF HOT METAL SURFACES AND OTHER SOURCES OF IGNITION. THE USE OF SELF-CONTAINED BREATHING APPARATUS WITH FULL FACE PIECE OPERATED IN PRESSURE-DEMAND OR OTHER POSITIVE PRESSURE MODE SHOULD BE PROVIDED FOR FIRE FIGHTERS IN BUILDINGS OR CONFINED AREAS WHERE THIS PRODUCT IS STORED. STORAGE CONTAINERS EXPOSED TO FIRE SHOULD BE KEPT COOL WITH WATER SPRAY IN ORDER TO PREVENT PRESSURE BUILD UP.</p>	<p>EXTINGUISHING MEDIA:</p> <p>FIRES INVOLVING THIS PRODUCT MAY BE CONTROLLED BY REGULAR FOAM, CARBON DIOXIDE, DRY CHEMICALS OR WATER SPRAY. WATER MAY BE USED TO REDUCE THE RATE OF BURNING AND FOR COOLING PURPOSES.</p> <p>COMBUSTIBLE LIQUID - CAN FORM</p> <p>COMBUSTIBLE MIXTURES AT TEMPERATURES AT OR ABOVE THE FLASH POINT. STATIC DISCHARGE - MATERIAL CAN ACCUMULATE</p> <p>STATIC CHARGES WHICH CAN CAUSE AN INCENDIARY ELECTRICAL DISCHARGE.</p> <p>"EMPTY" CONTAINERS RETAIN PRODUCT RESIDUE (LIQUID AND/OR VAPOR) AND CAN BE DANGEROUS. DO NOT PRESSURIZE, CUT, WELD, BRAZE, SOLDER, DRILL, GRIND, OR EXPOSE SUCH CONTAINERS TO HEAT, FLAME, SPARKS, STATIC ELECTRICITY, OR OTHER SOURCES OF IGNITION. THEY MAY EXPLODE AND CAUSE INJURY OR DEATH. EMPTY DRUMS SHOULD BE COMPLETELY DRAINED, PROPERLY BUNGED AND PROMPTLY RETURNED TO A DRUM RECONDITIONER, OR PROPERLY DISPOSED OF.</p>
<p>ELECTRO-STATIC ACCUMULATION HAZARD:</p> <p>USE PROPER GROUNDING</p>	<p>GENERAL HAZARD:</p> <p>THIS PRODUCT IS FLAMMABLE AND EXPLOSIVE UNDER NORMAL CONDITIONS IN THE PRESENCE OF FLAME OR SPARK SOURCE. FLAMMABLE VAPORS MAY ACCUMULATE IN THE CONTAINER HEADSPACE ON FORMATION OF HYDROLYSIS BY-PRODUCTS. IF STORAGE CONTAINERS ARE EXPOSED TO EXCESSIVE HEAT, OVER PRESSURIZATION OF THE CONTAINERS CAN RESULT. VAPOR IS HEAVIER THAN AIR AND MAY TRAVEL ALONG THE GROUND OR THROUGH VENTILATION SYSTEM CONSIDERABLE DISTANCE TO A SOURCE OF IGNITION AND FLASH BACK.</p> <p>KEEP WORK AREAS FREE OF HOT METAL SURFACES AND OTHER SOURCES OF IGNITION. THE USE OF SELF-CONTAINED BREATHING APPARATUS WITH FULL FACE PIECE OPERATED IN PRESSURE-DEMAND OR OTHER POSITIVE PRESSURE MODE SHOULD BE PROVIDED FOR FIRE FIGHTERS IN BUILDINGS OR CONFINED AREAS WHERE THIS PRODUCT IS STORED. STORAGE CONTAINERS EXPOSED TO FIRE SHOULD BE KEPT COOL WITH WATER SPRAY IN ORDER TO PREVENT PRESSURE BUILD UP.</p>

SECTION V FIREFIGHTING MEASURES

<p>INGESTION:</p> <p>DO NOT INDUCE VOMITING; SEEK IMMEDIATE MEDICAL ATTENTION.</p> <p>INHALATION:</p> <p>NOTE: THIS MATERIAL RELEASES METHYL ALCOHOL UPON HYDROLYSIS. METHYL ALCOHOL CAUSES OPTIC NEUROPATHY, METABOLIC ACIDOSIS AND RESPIRATORY DEPRESSION. SIGNS AND SYMPTOMS OF OVEREXPOSURE INCLUDE HEADACHE, BLURRED VISION, CONSTRICTED VISUAL FIELDS, SHORTNESS OF BREATH, DIZZINESS AND VERTIGO. INGESTION OF METHYL ALCOHOL MAY LEAD TO BLINDNESS OR DEATH.</p>	<p>SKIN:</p> <p>WATER. SEEK MEDICAL ATTENTION IF SKIN IRRITATION DEVELOPS AND PERSISTS.</p> <p>MOVE TO LOCATION FREE FROM VAPORS. IF BREATHING STOPS, BEGIN ARTIFICIAL RESPIRATION AND SEEK IMMEDIATE MEDICAL ATTENTION.</p> <p>EYES:</p> <p>FLUSH WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES. SEEK IMMEDIATE MEDICAL ATTENTION.</p> <p>WASH WITH SOAP AND LARGE QUANTITIES OF WATER. SEEK MEDICAL ATTENTION IF SKIN IRRITATION DEVELOPS AND PERSISTS.</p>
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SECTION IX PHYSICAL / CHEMICAL CHARACTERISTICS

BOILING POINT: (760mmHg) RANGE 168-202°C / 313-396°F (Stoddard Solvent)		MELTING POINT: -40°C / -40°F (Stoddard Solvent)	
VAPOR PRESSURE: 5 mmHg@68°F/25°C (Stoddard solvent)		VAPOR DENSITY (AIR=1): 4.8 (Stoddard solvent)	
SOLUBILITY IN H2O % BY WT: INSOLUBLE		% VOLATILES BY VOL: 50-70%	
EVAPORATION RATE (BtuAe=1): SLOW 0.1 (Stoddard Solvent)		SPECIFIC GRAVITY (H2O=1) 0.831	
pH (AS IS) N/A		pH (1% SOLN) N/A	
APPEARANCE AND ODOR: CLEAR TO YELLOW LIQUID WITH PAINT SOLVENT ODOR			
FLASH POINT: (TEST METHOD)	38°C / 100°F (TCC) (Stoddard Solvent)		
AUTOIGNITION TEMP:	232°C / 450°F (STODDARD SOLVENT)		
FLAMMABLE LIMITS IN AIR, % BY VOL:	LOWER: 0.8% UPPER: 6.0% (Stoddard solvent)		

SECTION X STABILITY AND REACTIVITY

CONDITIONS CONTRIBUTING TO INSTABILITY:	THIS PRODUCT IS STABLE.
INCOMPATIBILITY:	THIS PRODUCT IS INCOMPATIBLE WITH STRONG OXIDIZING AGENTS, STRONG ACIDS OR BASES, AND SELECTED AMINES.
HAZARDOUS DECOMPOSITION PRODUCTS:	THERMAL DECOMPOSITION IN THE PRESENCE OF AIR MAY YIELD CARBON MONOXIDE AND/OR CARBON DIOXIDE, AND UNIDENTIFIED ORGANICS.
CONDITIONS CONTRIBUTING TO HAZARDOUS POLYMERIZATION:	N/A WILL NOT OCCUR

SECTION XI TOXICOLOGICAL INFORMATION

ROUT OF TOXICITY	CONCLUSION/REMARKS	
INHALATION	TOXICITY	MINIMALLY TOXIC. BASED ON TEST DATA FOR STRUCTURALLY SIMILAR MATERIALS.
	IRRITATION	NEGLECTIBLE HAZARD AT AMBIENT/NORMAL HANDLING TEMPERATURES.
INGESTION	TOXICITY: LD50 >5000 mg/kg	MINIMALLY TOXIC. BASED ON TEST DATA FOR STRUCTURALLY SIMILAR MATERIALS.
SKIN	TOXICITY: LD50 >3180 mg/kg	MINIMALLY TOXIC. BASED ON TEST DATA FOR STRUCTURALLY SIMILAR MATERIALS.
	IRRITATION	MAY DRY THE SKIN LEADING TO DISCOMFORT AND DERMATITIS. BASED ON TEST DATA FOR STRUCTURALLY SIMILAR MATERIALS
EYE	IRRITATION	MAY CAUSE MILD, SHORT-LASTING DISCOMFORT TO EYES. BASED ON TEST DATA FOR STRUCTURALLY SIMILAR MATERIALS

CHRONIC/OTHER EFFECTS

FOR THE PRODUCT ITSELF	VAPOR/AEROSOL CONCENTRATIONS ABOVE RECOMMENDED EXPOSURE LEVELS ARE IRRITATING TO THE EYES AND RESPIRATORY TRACT. MAY CAUSE HEADACHES, DIZZINESS, ANESTHESIA, DROWSINESS, UNCONSCIOUSNESS, AND OTHER CENTRAL NERVOUS SYSTEM EFFECTS INCLUDING DEATH. PROLONGED AND/OR REPEATED SKIN MAY DEFAT THE SKIN RESULTING IN POSSIBLE IRRITATION AND DERMATITIS. SMALL AMOUNTS OF LIQUID ASPIRATED INTO THE LUNGS DURING INGESTION OR FROM VOMITING MAY CAUSE CHEMICAL PNEUMONITIS OR PULMONARY EDEMA.
	CONTAINS
	NAPHTHALENE: EXPOSURE TO HIGH CONCENTRATIONS OF NAPHTHALENE MAY CAUSE DESTRUCTION OF RED BLOOD CELLS, ANEMIS AND CATARACTS. NAPHTHALENE CAUSED CANCER IN LABORATORY ANIMALS STUDIES, BUT THE RELEVANCE OF THESE FINDINGS TO HUMANS IS UNCERTAIN. ETHYLBENZENE: CAUSED CANCER IN LABORATORY ANIMALS STUDIES. THE REVELANCE OF THESE FINDINGS TO HUMANS IN UNCERTAIN.

SECTION XII ECOLOGICAL INFORMATION

THE INFORMATION GIVEN IS BASED ON DATA AVAILABLE FOR THE MATERIAL, THE COMPONENTS OF THE MATERIALS AND SIMILAR MATERIALS	
ECOTOXICITY	MATERIAL EXPECTED TO BE TOXIC TO AQUATIC ORGANISMS. MAY CAUSE LONG-TERM ADVERSE EFFECTS IN THE AQUATIC ENVIRONMENT.
MOBILITY	MATERIAL HIGHLY VOLATILE, WILL PARTITION RAPIDLY TO AIR. NOT EXPECTED TO PARTITION TO SEDIMENT AND WASTEWATER SOLIDS.
PERSISTENCE AND DEGRADABILITY	
BIODEGRADATION	MATERIAL EXPECTED TO BE INHERENTLY BIODEGRADABLE
HYDROLYSIS	MATERIAL TRANSFORMATION DUE TO HYDROLYSIS NOT EXPECTED TO BE SIGNIFICANT
PHOTOLYSIS	MATERIAL TRANSFORMATION DUE TO PHOTOLYSIS NOT EXPECTED TO BE SIGNIFICANT.
ATMOSPHERIC OXIDATION	MATERIAL EXPECTED TO DEGRADE RAPIDLY IN AIR

SECTION XIII DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD: IF POSSIBLE, PUMP TO CONTROLLED CONTAINMENT AREA. ABSORB ON CLAY OR SAND. DISPOSE OF IN COMPLIANCE WITH EPA, FEDERAL, STATE, AND LOCAL REGULATIONS. TREATMENT, TRANSPORTATION AND DISPOSAL MUST BE IN COMPLIANCE WITH EPA FEDERAL, STATE, AND LOCAL REGULATIONS UNDER THE RESOURCES CONSERVATION AND RECOVERY ACT (RCRA, 40 CFR 261). TYPICALLY CONTROLLED BURNING, INCINERATION OR APPROVED LAND FILL SITES ARE AVAILABLE.

SECTION XIV TRANSPORTATION INFORMATION

Governing Body	Mode	UN Number	Proper Shipping Name	Hazard Class	Packin g Group
DOT	GROUND (NON BULK)	NON-REGULATE D	NON REGULATED	NON REGULATE D	NA
DOT	GROUND (BULK)	1993	FLAMMABLE LIQUID N.O.S (STODDARD SOLVENT, ALOXYSILANE)	3, FLAMMABLE	III
IATA	AIR	1993	FLAMMABLE LIQUID N.O.S (STODDARD SOLVENT, ALOXYSILANE)	3, FLAMMABLE	III
IMDG	OCEAN	1993	FLAMMABLE LIQUID N.O.S (STODDARD SOLVENT, ALOXYSILANE)	3, FLAMMABLE	III
MARINE POLLUTANT:		THIS PRODUCT DOES CONTAIN A MATERIAL ON THE MARINE POLLUTANTS TABLE (HMT 172.101 APPENDIX B)			

SECTION XV REGULATORY INFORMATION

TSCA: THE SOLVENT PORTION OF THIS PRODUCT IS LISTED ON THE TSCA INVENTORY AS A UVCB (UNKNOWN, VARIABLE COMPOSITION OR BIOLOGICAL) CHEMICAL AT CAS REGISTRY NUMBER 8052-41-3 (**STODDARD SOLVENT**)

CERCLA: IF THE REPORTABLE QUANTITY OF THIS PRODUCT IS ACCIDENTALLY SPILLED, THE INCIDENT IS SUBJECT TO THE PROVISIONS OF THE COMPREHENSIVE ENVIRONMENTAL RESPONSE COMPENSATION AND LIABILITY ACT (CERCLA) AND MUST BE REPORTED TO THE NATIONAL RESPONSE CENTER BY CALLING 1-800-424-8802 or 202-426-2675

NO REPORTABLE SPILL QUANTITY (RQ) HAS BEEN ESTABLISHED FOR THIS PRODUCT (STODDARD SOLVENT).

MARINE POLLUTANTS: THIS PRODUCT DOES CONTAIN A MATERIAL ON THE MARINE POLLUTANTS TABLE (HMT 172.101 Appendix B)

SARA TITLE III: UNDER THE PROVISIONS OF TITLE III, SECTIONS 311/312 OF THE SUPERFUND AMENDMENTS AND RE-AUTHORIZATION ACT, THIS PRODUCT IS CLASSIFIED INTO THE FOLLOWING HAZARD CATEGORIES: IMMEDIATE, DELAYED HEALTH, FIRE

ADDITIONAL REGULATORY CONCERNS: (FEDERAL, FDA, USDA, CPSC, STATE, OTHER)

CERCLA / RQ: NONE ESTABLISHED

THIS PRODUCT DOES NOT CONTAIN A MATERIAL ON RQ TABLE (HMT 172.101 Appendix A)

TSCA: IS THIS PRODUCT, OR ALL ITS INGREDIENTS, BEING CERTIFIED FOR INCLUSION ON THE TOXIC SUBSTANCES CONTROL ACT INVENTORY OF CHEMICAL SUBSTANCES? **YES**

SECTION XVI OTHER INFORMATION

PREPARED BY: DARRYL MANUEL / PRESIDENT

COMPANY: VEXCON CHEMICALS, INC.

ADDRESS: 7240 STATE RD., PHILA., PA 19135 USA

THE INFORMATION PROVIDED IN THIS MATERIAL SAFETY DATA SHEET HAS BEEN OBTAINED FROM SOURCES BELIEVED TO BE RELIABLE. VEXCON PROVIDES NO WARRANTIES, EXPRESSED OR IMPLIED, AND ASSUMES NO RESPONSIBILITY FOR THE ACCURACY OR COMPLETENESS OF THE INFORMATION CONTAINED HEREIN.

HMIS HAZARD RATINGS:

THIS INFORMATION IS FOR PEOPLE TRAINED IN:
NATIONAL PAINT AND COATINGS ASSOCIATIONS (NPCA)
HAZARDOUS MATERIALS IDENTIFICATION SYSTEM (HMIS)
NATIONAL FIRE PROTECTION ASSOCIATION (NFPA 704)
IDENTIFICATION OF FIRE HAZARDS OF MATERIALS

KEY

4 – SEVERE

VEXCON CERTI-VEX PENSEAL 244-40%	NPCA-HMIS	NFPA 704	
HEALTH	2	2	2 – MODERATE
FLAMMABILITY	2	2	1 – SLIGHT
REACTIVITY	1	1	0 – MINIMAL