

## CERTI-VEX® PATCH UW

### FAST SETTING UNDER WATER PATCH and REPAIR MORTAR RAPID STRENGTH GAIN • RAPID SETTING

#### DESCRIPTION

**CERTI-VEX PATCH UW** is engineered with portland cement, finely graded aggregates, and shrinkage compensated materials to provide a rapid setting and strength gain repair mortar for tidal zone and underwater placements. The product can be used for fast repairs to, seawalls, piers, pilings and other underwater surfaces. When properly used the material exhibits exceptional strength and excellent resistance to wash out.

#### BENEFITS

- Rapid set times 10 - 20 minutes
- Repairs underwater and at hi tide/low tide mark
- Rapid early strength gain
- Non-shrink
- Feather edge repairs up to 2"
- Excellent freeze/thaw resistance
- Good bond, tensile and flexural strength
- Contains no chlorides, metals or gypsum
- Pumpable and flowable
- Salt water resistant
- Resists washout

#### SURFACE PREPARATION

- Surfaces to be repaired must be structurally sound, clean and free of dust, dirt, oils, paints, marine growth and all other contaminants that will prevent proper bond.
- Prepare area by high pressure water blast, or other mechanical means to expose an aggregate rough surface with a minimum surface profile of +/- 1/16 inch.
- Saw cut the perimeter of the repair 1/2 inch or the top of the reinforcing steel, not cutting the steel.
- If reinforcing steel is exposed, remove 1inch of surrounding concrete. If there is corrosion on the reinforcing steel remove concrete 3 inch beyond any evidence of corrosion along the steel. Remove all corrosion and protect the steel with a corrosion resistant barrier or a slurry coat of Certi-Vex Patch UW. If applying a slurry coat apply two applications allowing to dry between applications.

#### SURFACE CONDITIONING

The surface to receive the repair material must be saturated, surface dry (SSD).

#### PRIMING

- Prime the prepared substrate with a brush or spray applied coat of **StarSeal Envio Bond** to the SSD surface.
- Alternatively, apply a scrub coat by mixing Certi-Vex Patch UW with the maximum allowable amount of clean water and scrub the material onto all exposed surfaces to receive Certi-Vex Patch UW Place Certi-Vex Patch UW into the wet scrub coat before it dries.

#### MIXING

- Certi-Vex Patch UW requires only the addition of water. No other additives should be used.
- Mixing proportions: Use 4.5 quarts of clean, potable water per 50 lb. bag.
- Add water to a suitable mixing vessel. Hand or drill mix with a low speed drill (not to exceed 650 RPM) is acceptable.
- Place most of the water in a clean mixing container. Reserve the remainder. Add 3/4 of powder then mix until uniform. Add remainder of powder and continue to mix to a smooth, lump-free consistency. Add reserve water if necessary to achieve desired workable consistency.
- Mix enough material to permit continuous placement before any part of the material has set.
- **NOTE:** Do not mix longer than two (2) minutes. Do not mix more material than can be placed in 5 minutes. **DO NOT RETEMPER.**
- **NOTE:** For a flowable consistency add up to 6 quarts of water per 50 pounds of material.

#### SET TIMES

To extend set time use cold water. To reduce set time use hot water. Site environmental conditions such as air and substrate temperature will also affect set times.

#### PLACEMENT

- Firmly work into the SSD surface by hand or trowel, filling all pores and voids. Force material against edge of repair, working toward center. After filling the repaired area shave to conform to contour of surrounding surface.
- For pumping, contact your Vexcon representative.

#### YIELD

50 pounds will yield 0.45 cubic feet of repair mortar with a trowelable consistency.

### **LIMITATIONS/SPECIAL NOTES**

- Do not attempt to restore workability or add water to the surface during finishing.
- Do not apply when air or surface below 40° F (5° C).
- All materials should be conditioned to the appropriate temperature range of 40° F to 90° F (5° C - 32° C) prior to mixing and placement.
- Protect from freezing
- Do not exceed liquid requirements
- For additional information on substrate preparation refer to ICRI guide lines.
- 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.

### **HEALTH AND SAFETY**

This product is a gray powdered. Continued inhalation of dust over a period of years without proper respirator and ventilation controls may cause silicosis and lung cancer. Use only with safety glasses, neoprene gloves and protective clothing recommended. Before using product, it is advisable to obtain a copy of the MSDS # from your distributor or by contacting Vexcon Chemicals.

### **PACKAGING**

Certi-Vex Patch UW is available in 50-pound pails. Contact Vexcon directly to discuss your customized packaging requirements.

### **TECHNICAL DATA**

Set Time (Gilmore)	
Initial	10 Minutes
Final	18 Minutes
Compressive Strength (ASTM C 109)	
1 Day	4,850 psi
7 Days	7,350 psi
28 Days	8,225 psi
Shear Bond (ASTM C 882)	
7 Days	1,100 psi
28 Days	1,390 psi
Shrinkage/Expansion (ASTM C 157)	
28 Days	0.034%
Tensile Strength (ASTM C 190)	
1 Day	580 psi
28 Days	780 psi
Freeze/Thaw Resistance (ASTM C 666)	
50 cycles	Excellent
Color	Light Gray

### **CONTACT US @**

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

- |  |  |
|--|--|
| • <a href="http://vexcon.com">vexcon.com</a>                                 | • <a href="mailto:sales@vexcon.com">sales@vexcon.com</a> |
| • <a href="mailto:techservice@vexcon.com">techservice@vexcon.com</a>         | • Voice: 888.839.2661                                    |
| • <a href="mailto:customerservice@vexcon.com">customerservice@vexcon.com</a> | • Fax: 215.332.9997                                      |

### **WARRANTY**

Vexcon warrants that the goods supplied hereunder shall be of its standard quality and shall conform in all material respects to the sample which has been made available for testing by buyer prior to sale. As the EXCLUSIVE REMEDY for any breach of this Limited Warranty, Vexcon shall replace nonconforming goods or refund the purchase price. Since methods of use and application are beyond Vexcon's control, this Limited Warranty IS IN LIEU OF ALL OTHER WARRANTIES EXPRESS 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 LIABILITIES 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 OR NEGLIGENCE, GROSS NEGLIGENCE, STRICT LIABILITY OR ANY OTHER TORT. 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. 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 and 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.