

# CPD® FASTCRETE ULTRA

## DESCRIPTION

CPD® Fastcrete Ultra is a two component polymer modified non sag, fast setting cementitious repair mortar which is **similar to the color of concrete**. The CPD® Fastcrete Ultra is also enhanced with a micro silica and Migrating Corrosion Inhibitor® by Cortec to reduce rebar corrosion. It is designed for application as a repair material to vertical, overhead and horizontal concrete surfaces.

## WHERE TO USE

- use on vertical, overhead and horizontal concrete surfaces
- use on grade, above and below grade concrete surfaces
- use as a structural repair material for parking garage structures, balconies, building envelopes, bridges, tunnels, dams and industrial applications.

## BENEFITS

- **similar to the color of concrete** compared to most other liquid polymer modified concrete repair mortars
- non sag consistency (up to 38mm (1 ½") per lift)
- fast setting
- bond strength ensures superior adhesion
- compatible with coefficient of thermal expansion of concrete
- increased resistance to de-icing salts
- good freeze thaw resistance
- high early strengths
- high compressive and flexural strengths
- not a vapor barrier
- easy to use

## PROPERTIES

Work time: @ 20°C (68°F) 15 minutes. The mortar remains plastic for a longer period of time, but it will have less adhesion after 15 minutes, depending on temperature.

Initial set: @20°C (68°F) 30 minutes. This depends on temperature, relative humidity and type of finish desired.

Compressive Strength  
(ASTM C109)

1 day.....24.1 MPa (3495 psi)  
7 days.....45.3 MPa (6569 psi)  
28 days.....58.2 MPa (8439 psi)

Modulus of Elasticity  
(ASTM C 469)

7 days .....7.76 GPa (1.13 x 10<sup>6</sup> psi)

Tensile Splitting Strength  
(ASTM C 469)

21 days .....2.65 MPa (384 psi)

Bond Strength

(CAN A23.2 -6B) Greater than concrete

Slant Shear Bond Strength  
(ASTM C-882 -90)

1 day .....5.2 MPa (754 psi)

28 days .....11.8 MPa (1711 psi)

Rapid Chloride Permeability  
(AASHTO T277)

14 days .....432 Coulombs

ASTM C1202 Classification = Very Low

The above information is representative of actual production runs. Independent test results may vary from the above by approximately ± 10 %.

## APPLICATION

### SURFACE PREPARATION

Concrete substrate must be clean, sound and free from dust, loose particles, oil , grease and all other foreign matter. If concrete is punky, chip down to sound concrete. Preparation work must be done by chipping or sand blasting. Aggregate exposure is required for a good bond. Ensure the patch area is a minimum of 3mm (1/8") in depth.

### PLACING

This is a fast setting patching material. Job procedures must be modified to minimize the time between mixing and placing product. All areas to be patched must be pre-dampened with water and receive a slurry bond coat immediately prior to placing the Fastcrete Ultra. For the slurry bond coat use a unit of Fastcrete Ultra with additional liquid polymer to achieve a slurry coat (pancake batter consistency). Scrub the slurry bond coat into the substrate filling all pores and voids. Allow the scrub coat to become tacky prior to applying mortar. Allow mortar to set then finish as desired. If multiple lifts are required, apply each lift as the material below it sets. Any mortar placed the previous day must be roughened to assure a good bond with additional mortar placements.

## MIXING

For best results mix mechanically using a heavy duty slow speed drill equipped with a mud mixer blade. Add all of the Part "B" (liquid polymer) to a clean 18.9L (5U.S. gallon) pail. Note: shake the part "B" container prior to using. Add approximately 4/5 of the part "A" powder component and mix for 1 minute. Thereafter add the remaining 1/5 of the part "A" powder and mix for an additional 2 minutes. Place the mixed product as soon as possible after mixing. The components are in exact ratio to yield a workable non sag consistency mortar. For small quantities, the mix ratio is A:B = 5.56:1 by weight.

### **Small Mixes by Volume**

4.5 parts of loose powder + 1 part liquid polymer

## FINISHING AND CURING

Place and finish by hand. To achieve published properties damp cure for 24 hours or apply CPD<sup>®</sup> Acrylic Cure and Seal (Water Based). Always protect newly applied mortar from rain and freezing conditions. Extra caution must be taken when placing at high temperatures.

## LIMITATIONS

- not for use below 5°C (40°F)
- not recommended for structural grouting applications
- not recommended for applications under 3mm (1/8")
- do not exceed 38mm (1 1/2") per lift
- do not exceed 75mm (3") without additional reinforcement
- surface should be damp, but free from excess water

## COVERAGE

Approximately 0.011m<sup>3</sup> (0.40ft<sup>3</sup>) per unit.

## STANDARDS

Approved for use on all MTQ (Ministry of Transportation, Quebec) and MTO (Ministry of Transportation, Ontario) projects.

## PACKAGING

Part "A" (powder) 20kg (44lbs)

Part "B" (liquid polymer) 3.6L (0.95 U.S. gallon)

## CLEAN UP

Clean all equipment with water prior to material set.

## STORAGE

Store on pallets in dry heated warehouse.

## SAFETY PRECAUTIONS

Consult Material Safety Data Sheet ( M.S.D.S.) for specific instructions. MSDS # 250 and #251.

## SHELF-LIFE

Approximately one year when stored in dry heated warehouse on pallets in original containers. Protect from moisture and freezing.

## WARRANTY

The recommendations made and the information herein is based on our own and independent laboratory experience, and is believed to be accurate under controlled conditions. However, no warranty or guarantee of accuracy is made because we cannot cover every possible application of product nor anticipate every variation encountered in weather conditions, job-conditions, methods used and types of surfaces on which the product is applied. The users shall make their own tests to determine the suitability of such products for any particular purpose.

CPD<sup>®</sup> makes no warranties with respect to this product, expressed or implied, including, without limitation, the implied warranties of merchantability or fitness for a particular purpose.

CPD<sup>®</sup>'s liability shall be limited in all events to supplying sufficient product to re-treat and/or repair the specific area to which CPD<sup>®</sup> product has been applied. CPD<sup>®</sup> reserves the right to have the true cause of any difficulty determined by accepted test methods. CPD<sup>®</sup> shall have no other liability, including liability for incidental, consequential or resultant damages, however caused, whether due to breach of warranty, negligence, or strict liability.

**THIS WARRANTY MAY NOT BE MODIFIED OR EXTENDED BY REPRESENTATIVES OF CPD<sup>®</sup>, ITS DISTRIBUTORS OR DEALERS**