



BUILDING CODE COMPLIANCE OFFICE
METRO-DADE FLAGLER BUILDING
140 WEST FLAGLER STREET, SUITE 1603
MIAMI, FLORIDA 33130-1563
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CONTRACTOR LICENSING SECTION
(305) 375-2527 FAX (305) 375-2558

CONTRACTOR ENFORCEMENT DIVISION
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PRODUCT CONTROL DIVISION
(305) 375-2902 FAX (305) 372-6339

PRODUCT CONTROL NOTICE OF ACCEPTANCE

U.S. Anchor Corporation
450 East Copans Road
Pompano Beach ,FL 33064

Your application for Notice of Acceptance (NOA) of:

Ultrabond 1, 2, 3, & CA

under Chapter 8 of the Code of Miami-Dade County governing the use of Alternate Materials and Types of Construction, and completely described herein, has been recommended for acceptance by the Miami-Dade County Building Code Compliance Office (BCCO) under the conditions specified herein.

This NOA shall not be valid after the expiration date stated below. BCCO reserves the right to secure this product or material at any time from a jobsite or manufacturer's plant for quality control testing. If this product or material fails to perform in the approved manner, BCCO may revoke, modify, or suspend the use of such product or material immediately. BCCO reserves the right to revoke this approval, if it is determined by BCCO that this product or material fails to meet the requirements of the South Florida Building Code.

The expense of such testing will be incurred by the manufacturer.

Raul Rodriguez
Chief Product Control Division

ACCEPTANCE NO.: 01-0117.01
EXPIRES: 01/13/2006

THIS IS THE COVERSHEET, SEE ADDITIONAL PAGES FOR SPECIFIC AND GENERAL
CONDITIONS
BUILDING CODE & PRODUCT REVIEW COMMITTEE

This application for Product Approval has been reviewed by the BCCO and approved by the Building Code and Product Review Committee to be used in Miami-Dade County, Florida under the conditions set forth above.

Francisco J. Quintana, R.A.
Director
Miami-Dade County
Building Code Compliance Office

APPROVED: 05/03/2001

NOTICE OF ACCEPTANCE: SPECIFIC CONDITIONS

1. SCOPE

- 1.1** This renews the Notice of Acceptance No. 97-1103.03 that was issued on 01/13/98. It approves an epoxy anchoring system as described in Section 2 of this Notice of Acceptance, designed to comply with the South Florida Building Code (SFBC), 1994 Edition for Miami-Dade County. For the locations where the actual loads as determined by SFBC Chapter 23, do not exceed the allowable load indicated in the approved drawings.

2. PRODUCT DESCRIPTION

- 2.1** The **Ultrabond 1, 2, 3 & CA** shall be fabricated and used in strict compliance with the following documents: Drawing No. J31501, Sheet 1 & 2 of 2, titled "Ultrabond Epoxy and Capsules", prepared by U.S. Anchor Corporation, and dated 03/15/01 with no revisions, The drawing shall bear the Miami-Dade County Product Control Approval stamp with the Notice of Acceptance number and approval date by the Miami-Dade Product Control Division. These documents shall hereinafter be referred to as the approved drawings.

3. LIMITATIONS

- 3.1** Allowable loads are for concrete with a compressive strength as listed on the approved drawing.
3.2 The temperature of the environment affects adhesive performance.

4. INSTALLATION

- 4.1** The epoxy anchoring system shall be installed in strict compliance with the installation instructions published by U.S. Anchor Corporation and shown on sheet 2 of 2.

5. LABELING

- 5.1** Each box and container of epoxy anchoring system shall have a permanent label with the manufacturer's name or logo, city, state and the following statement: "Miami-Dade County Product Control Approved".

6. BUILDING PERMIT

- 6.1** Application for Building Permit shall be accompanied by copies of the following:
6.1.1 This Notice of Acceptance
6.1.2 Duplicate copies of the approved drawings as identified in Section 2 of this Notice of Acceptance, clearly marked to show the hangers and angles selected for the proposed installation.
6.1.3 Any other document required by the Building Official or the SFBC in order to properly evaluate the installation of these products.



Candido Font, PE, Sr. Product Control Examiner
Product Control Division

U. S. Anchor Corporation.

ACCEPTANCE NO.: 01/0117.01

APPROVED: MAY 03 2006

EXPIRES: 01/13/2006

NOTICE OF ACCEPTANCE STANDARD CONDITIONS

1. Renewal of this Acceptance (approval) shall be considered after a renewal application has been filed and the original submitted documentation, including test supporting data, engineering documents, are no older than eight (8) years.
2. Any and all approved products shall be permanently labeled with the manufacturer's name, city, state, and the following statement: "Miami-Dade County Product Control Approved", or as specifically stated in the specific conditions of this Acceptance.
3. Renewals of Acceptance will not be considered if:
 - a) There has been a change in the South Florida Building Code affecting the evaluation of this product and the product is not in compliance with the code changes;
 - b) The product is no longer the same product (identical) as the one originally approved;
 - c) If the Acceptance holder has not complied with all the requirements of this acceptance, including the correct installation of the product;
 - d) The engineer who originally prepared, signed and sealed the required documentation initially submitted is no longer practicing the engineering profession.
4. Any revision or change in the materials, use, and/or manufacture of the product or process shall automatically be cause for termination of this Acceptance, unless prior written approval has been requested (through the filing of a revision application with appropriate fee) and granted by this office.
5. Any of the following shall also be grounds for removal of this Acceptance:
 - a) Unsatisfactory performance of this product or process.
 - b) Misuse of this Acceptance as an endorsement of any product, for sales, advertising or any other purpose.
6. The Notice of Acceptance number preceded by the words Miami-Dade County, Florida, and followed by the expiration date may be displayed in advertising literature. If any portion of the Notice of Acceptance is displayed, then it shall be done in its entirety.
7. A copy of this Acceptance as well as approved drawings and other documents, where it applies, shall be provided to the user by the manufacturer or its distributors and shall be available for inspection at the job site at all time. The engineer need not reseal the copies.
8. Failure to comply with any section of this Acceptance shall be cause for termination and removal of Acceptance.
9. This Notice of Acceptance consists of pages 1, 2 and this last page 3.


Candido Font, PE, Sr. Product Control Examiner
Product Control Division

END OF THIS ACCEPTANCE

U. S. Anchor Corporation.

ACCEPTANCE NO: 01-0117.01

APPROVED: MAY 03 2001

EXPIRES: 01/13/2006

NOTICE OF ACCEPTANCE: SPECIFIC CONDITIONS
(For File ONLY. Not part of NOA)

A DRAWINGS:

1. Drawings prepared by U. S. Anchor Corporation, titled "Ultrabond Epoxy and Capsules", Drawing No: J31501, dated 03/15/2001 with no revisions, sheet 1 & 2 of 2, signed and sealed by S. E. Black, PE.

B TEST:

1. Test report on Pull-Out and Shear Resistance for a Chemical Anchor in Concrete Slab, Project No. 22028 for "Ultrabond" per ASTM E 488, prepared by Atec Associates, Inc. on 09/17/92 and revised on 11/17/92, signed and sealed by P. G. Read, PE
- 2.

C CALCULATIONS:

N/A

D MATERIAL CERTIFICATIONS:

N/A

E STATEMENTS:

1. No change letter issued by U.S. Anchor Corporation on 01/12/2001, signed by F. Lutzy.



Candido Font, PE, Sr. Product Control Examiner
Product Control Division

DESCRIPTION:

Ultrabond is a two component 100% solid epoxy designed to achieve high strength when anchoring in solid concrete. The epoxy is contained in a two-cartridge set and dispensed in a 1 to 1 ratio. When used with standard threaded rods the allowable tension and shear loads are applicable. Ultrabond is also available in capsules mixed by rotating the threaded rods inside the hole with an electric drill.

Ultrabond Accelerated Time (1) - Allowable Loads in pounds

| Anchor Diameter | Concrete 3000 | | Concrete 5000 | | Concrete 7000 | |
|-----------------|---------------|---------|---------------|---------|---------------|----------|
| | Tension | Shear | Tension | Shear | Tension | Shear |
| 3/8" | 2,334 ✓ | 1,735 ✓ | 2,531 ✓ | 1,759 ✓ | 2,734 ✓ | 1,786 ✓ |
| 1/2" | 3,537 ✓ | 2,079 ✓ | 3,628 ✓ | 2,595 ✓ | 4,600 ✓ | 3,274 ✓ |
| 5/8" | 4,900 ✓ | 3,832 ✓ | 5,172 ✓ | 4,514 ✓ | 7,322 ✓ | 4,763 ✓ |
| 3/4" | 6,263 ✓ | 5,584 ✓ | 6,716 ✓ | 6,433 ✓ | 8,691 ✓ | 6,518 ✓ |
| 7/8" | 8,344 ✓ | 7,341 ✓ | 8,582 ✓ | 7,852 ✓ | 9,881 ✓ | 8,273 ✓ |
| 1" | 10,424 ✓ | 9,099 ✓ | 10,448 ✓ | 9,271 ✓ | 13,036 ✓ | 10,238 ✓ |

- 1) Allowable load is equal to ultimate load divided by 4
- 2) Working Time 7 to 10 minutes at 80 °F with 20 gram mass.
- 3) Minimum load time 3 to 4 hours at 80 °F.

Ultrabond Extended Time (2) - Allowable Loads in pounds

| Anchor Diameter | Concrete 3000 | | Concrete 5000 | |
|-----------------|---------------|----------|---------------|---------|
| | Tension | Shear | Tension | Shear |
| 3/8" | 2,334 ✓ | 1,804 ✓ | 2,432 ✓ | 1,713 ✓ |
| 1/2" | 3,625 ✓ | 2,423 ✓ | 3,678 ✓ | 2,710 ✓ |
| 5/8" | 5,451 ✓ | 3,756 ✓ | 5,615 ✓ | 3,805 ✓ |
| 3/4" | 7,277 ✓ | 5,080 ✓ | 7,552 ✓ | 4,900 ✓ |
| 7/8" | 9,442 ✓ | 7,729 ✓ | 10,057 ✓ | 6,746 ✓ |
| 1" | 11,608 ✓ | 10,367 ✓ | 12,563 ✓ | 8,591 ✓ |

- 1) Allowable load is equal to ultimate load divided by 4
- 2) Working Time 25 to 35 minutes at 80 °F with 20 gram mass.
- 3) Minimum load time 8 hours at 80 °F.

Ultrabond Quick Cure (3) - Allowable Loads in pounds

| Anchor Diameter | Concrete 3000 | | Concrete 5000 | | Concrete 7000 | |
|-----------------|---------------|----------|---------------|----------|---------------|----------|
| | Tension | Shear | Tension | Shear | Tension | Shear |
| 3/8" | 2,725 ✓ | 1,828 ✓ | 2,725 ✓ | 1,786 ✓ | 2,685 ✓ | 1,786 ✓ |
| 1/2" | 3,346 ✓ | 2,079 ✓ | 3,583 ✓ | 3,363 ✓ | 4,670 ✓ | 3,363 ✓ |
| 5/8" | 5,423 ✓ | 4,086 ✓ | 5,841 ✓ | 4,234 ✓ | 7,798 ✓ | 4,941 ✓ |
| 3/4" | 7,500 ✓ | 6,094 ✓ | 8,099 ✓ | 5,867 ✓ | 10,089 ✓ | 7,024 ✓ |
| 7/8" | 9,985 ✓ | 8,086 ✓ | 10,743 ✓ | 7,955 ✓ | 11,548 ✓ | 9,107 ✓ |
| 1" | 12,470 ✓ | 10,078 ✓ | 13,386 ✓ | 10,079 ✓ | 14,524 ✓ | 11,309 ✓ |

- 1) Allowable load is equal to ultimate load divided by 4
- 2) Working Time 4 to 5 minutes at 60 °F or less.
- 3) Minimum load time 1 to 2 hours.

Ultrabond Capsule Anchor (CA) - Allowable load in pounds

| Anchor Diameter | Concrete 3000 | | Concrete 5000 | |
|-----------------|---------------|---------|---------------|---------|
| | Tension | Shear | Tension | Shear |
| 3/8" | 2,518 ✓ | 1,528 ✓ | 2,641 ✓ | 1,851 ✓ |
| 1/2" | 3,961 ✓ | 1,726 ✓ | 4,244 ✓ | 2,538 ✓ |
| 5/8" | 5,926 ✓ | 2,964 ✓ | 6,960 ✓ | 4,597 ✓ |
| 3/4" | 7,880 ✓ | 4,203 ✓ | 9,675 ✓ | 6,656 ✓ |
| 7/8" | 11,494 ✓ | 6,737 ✓ | 11,131 ✓ | 8,022 ✓ |
| 1" | 12,609 ✓ | 9,272 ✓ | 12,586 ✓ | 9,387 ✓ |

- 1) Allowable load is equal to ultimate load divided by 4.
- 2) Curing time at 5 to 14 °F is 5 hours, 14 to 32 °F is 1 hour, 50 to 68 °F is 30 min. and over 68 °F is 20 min.

INSTALLATION: Recommended minimum distances for 100% allowable loads.

| Anchor Diameter | Hole Diameter | Embedment Depth | Spacing Distance | Edge Distance | Substrate Thickness | Maximum Torque |
|-----------------|---------------|-----------------|------------------|---------------|---------------------|----------------|
| 3/8" | 7/16" | 3 1/2" | 5 1/4" | 3 1/2" | 5 1/4" | 14 |
| 1/2" | 9/16" | 4 1/2" | 6 3/4" | 4 1/2" | 6 3/4" | 30 |
| 5/8" | 3/4" | 5 5/8" | 8 3/8" | 5 5/8" | 8 3/8" | 70 |
| 3/4" | 7/8" | 6 3/4" | 10 1/8" | 6 3/4" | 10 1/8" | 120 |
| 7/8" | 1" | 7 7/8" | 11 7/8" | 7 7/8" | 11 7/8" | 165 |
| 1" | 1 3/8" | 9" | 13 1/2" | 9" | 13 1/2" | 195 |

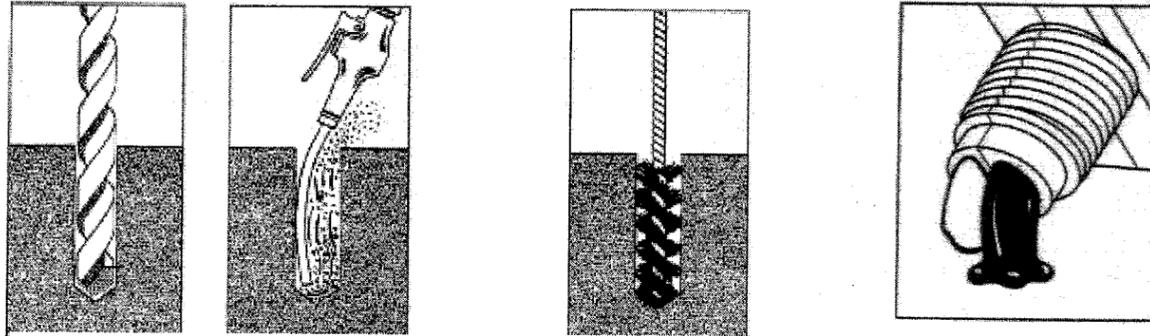
- 1) All dimensions in inches, except for torque, which is ft-lbs.
- 2) Allowable loads are based on standard thread bolts.
- 3) Capacity of threaded rods on tension and shear shall be taken in consideration to determine allowable loads.

APPROVED AS COMPLYING WITH THE SOUTH FLORIDA BUILDING CODE
 DATE MAY 03 2001
 BY [Signature]
 PRODUCT CONTROL DIVISION
 BUILDING CODE COMPLIANCE OFFICE
 ACCEPTANCE NO. 01-0117.01

| | | | | | | |
|--------------|---------|-----------|------|----------------|---|------------------------------|
| FL P.E. Seal | Rev No. | REVISIONS | Date | For Office Use | US Anchor Corp. 450 E. Copans Rd. Pompano Beach, Florida 33064 | |
| | | | | | TITLE: | Ultrabond Epoxy and capsules |
| | | | | | Drawing Number | J31501 |
| | | | | | Sheet Number | 1 of 2 |
| | | | | | Drawing Date | 3/15/01 |
| | | | | | Product approval # | 01-0117.01 |
| | | | | | Drawn By: J. H. | |

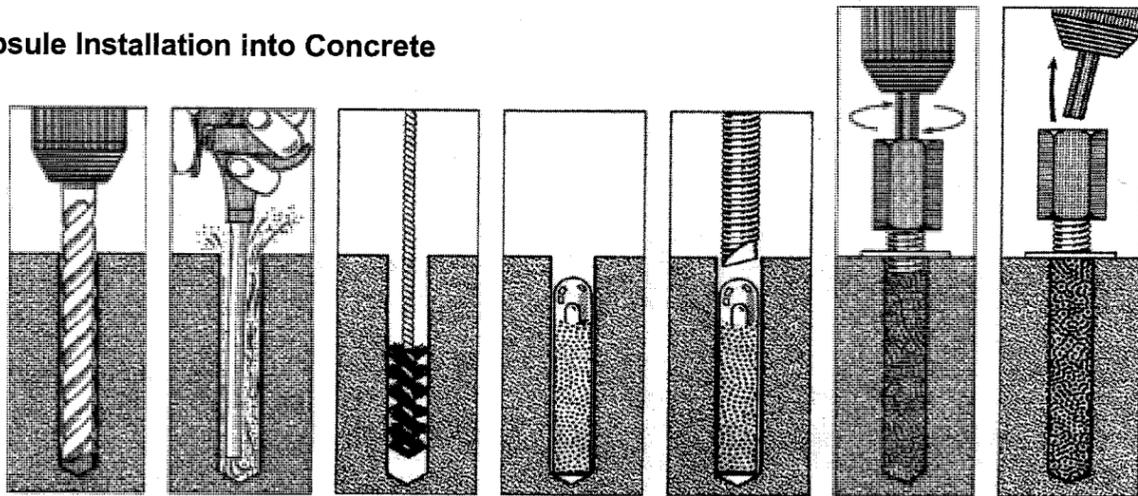
INSTALLATION INSTRUCTIONS

Epoxy Installation into Concrete

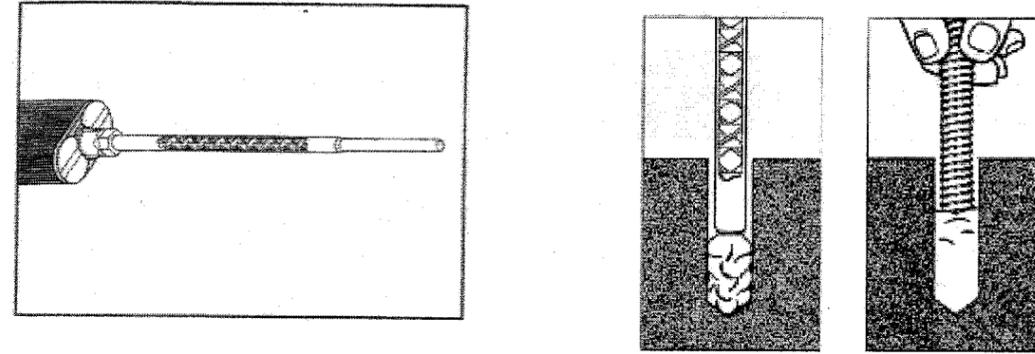


1. Drill hole to proper diameter and length.
2. Blow out dust from the bottom of the hole.
3. Brush the hole with a nylon brush. Blow out the hole again. The hole should be clean of any dust and debris.
4. Place the cartridge into the dispensing gun. Remove the plastic caps from the cartridge. Dispense a small amount of epoxy into a container until you get an even flow of both black and white material.

Capsule Installation into Concrete

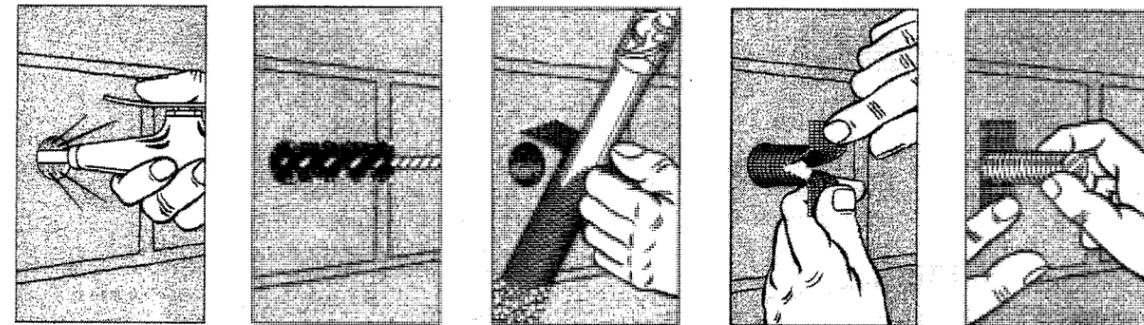


1. Drill hole to proper diameter and depth.
2. Blow out dust from the bottom of the hole.
3. Brush out the hole with a nylon brush. Blow out dust once again.
4. Insert capsule into the bottom of the hole.
5. Assemble chamfered rod into drive unit of a rotary drill.
6. Drill rod to the bottom of the hole.
7. Without disturbing the anchor, remove drill from the anchor.



5. Place the nozzle on the cartridge. Slide the nut over the nozzle and thread the nut onto the cartridge. Dispense enough epoxy into a disposable container, until the color becomes a consistent gray color with no streaks.
6. Dispense the material from the bottom of the hole up. Fill approximately 5/8 of the hole depth while slowly withdrawing the nozzle.
7. Insert the threaded rod to the bottom of the hole while turning clockwise. The threaded rod should be free from dirt, grease, oil or other foreign material. Do not disturb or bolt-up until minimum bolt-up time has passed.

Epoxy Installation into Unreinforced Concrete



1. Drill hole and blow out the dust from the hole.
2. Brush out the hole with a nylon brush. Blow out the dust one final time.
3. Insert the mixing nozzle into the bottom of the screen and completely fill the screen while withdrawing the nozzle. Fill the screen completely all the way to the top.
4. Insert the epoxy filled screen into the hole.
5. Insert the threaded rod or dowel all the way into the screen. Do not disturb the anchor or bolt up the anchor until minimum bolt up time.

APPROVED AS COMPLYING WITH THE
SOUTH FLORIDA BUILDING CODE
DATE **MAY 03 2001**
BY
PRODUCT CONTROL DIVISION
BUILDING CODE COMPLIANCE OFFICE
ACCEPTANCE NO. 01-0117.01

| FL P.E. Seal | Rev No. | REVISIONS | Date | For Office Use | US Anchor Corp. 450 E. Copans Rd. Pompano Beach, Florida 33064 | |
|--------------|---------|-----------|------|----------------|---|----------------------------|
| 3/20/01 | | | | | TITLE: ULTRABOND EPOXY AND CAPSULES | |
| | | | | | Drawing Number J31501 | Sheet Number 2 of 2 |
| | | | | | Drawing Date 3/15/01 | |
| | | | | | Product approval #01-0117.01 | Drawn By: J. H. |
| | | | | | | |