



April 26, 1999

Mr. Bob Cauley  
US Architectural Products, Inc.  
PO Box 1914  
Fairview, NC 28730

Dear Mr. Cauley:

We have completed the testing of our adhesive for your Cement Board product you recently sent us. We have identified one of our products as an excellent adhesive.

Our product called Bonstone Anchor™ is a two-component epoxy adhesive designed for the structural adhering of rigid materials, such as stone, concrete, masonry, wood, metals, etc. We mixed the adhesive, applied it to your sample panels with no surface preparation, and allowed it to cure. We then tested the glued assembly (three samples) in the shear mode on our Tinius Olsen tensile/compression tester until failure occurred.

In all cases, the bond held securely. Failure occurred in the substrate—the Board cleaved about 1/4" from the bond line. The average shear strength of the assembly (actually, the shear strength of the Board), was 260 psi.

Bonstone Anchor™ makes an excellent adhesive for your Board. It is easy to mix and apply, cures quickly, and provides a strong, durable, water-and weather-resistant permanent structural bond. I would most definitely recommend it for use whenever the need arises to glue your Boards, either to themselves or to other substrates.

Thank you for allowing us to test your Board in conjunction with our adhesive. If you have any questions or comments, or would like to obtain samples of Bonstone Anchor™, please call me.

Sincerely,

A handwritten signature in black ink that reads "Mike Beckmann". The signature is written in a cursive style with a long, sweeping underline.

Mike Beckmann  
Director of Operations

707 SWAN DRIVE • MUKWONAGO, WI 53149

TEL 414 363-9877 • FAX 414 363-9879

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BONSTONE MATERIALS CORPORATION

C O N S T R U C T I O N A D H E S I V E S

## TECHNICAL DATA SHEET

FILE UNDER DIV. 4

### 1. PRODUCT NAME

**BONSTONE™ ANCHOR  
A-100/B-412X**

### 2. MANUFACTURER

Bonstone Materials Corporation  
(address: see bottom of page)

### 3. PRODUCT DESCRIPTION

A two-component exterior grade epoxy adhesive. Six hour initial cure. Flowing paste viscosity. ( Family includes **A-100, A-110, A-120, A-130, A-180, & A-190**)

#### Applications:

- Setting anchor bolts
- Laminating stone to other construction material
- Stone to stone bonding

#### Limitations:

Use on dry stone. Use on oil,- grease,- and coating-free stone. Some yellowing and chalking will occur when exposed to ultra-violet light.

#### Colors:

Six standard colors. Custom color matching available.

#### Applicable Standards:

Indiana Limestone Institute specifications for units preassembled with thermosetting resin.

### 4. TECHNICAL DATA:

( On reverse side)

### 5. INSTALLATION

*General Instructions*

( See separate doweling, laminating, and patching instructions for more specific instructions. CSI format specifications are available.)

#### Surface Preparation & Use:

Use gloves, wear eye protection, and avoid skin contact. When grinding cured joints, wear a dust mask. Substrate to be bonded must be completely dry and dust free. Mix only the amount of epoxy which can be used in 10 minutes. Avoid stressing joint before complete cure of epoxy. Mask areas which must be kept free of epoxy. Clean uncured epoxy from tools with toluol (toluene) or xylol (xylene). ( Use caution, these solvents are flammable. Ensure local ventilation.) Remove cured epoxy mechanically.

#### Mixing instructions:

All material should be at or above 60°F. Combine the two ingredients at the following weight ratio: One part of A-100 to one part B-412X. Mix thoroughly--- ingredients must be blended homogeneously for proper cure. Best to mix using double mix method. See reverse side.

#### Temperature dependency:

The adhesive, substrate, and environment's temperature will affect the working properties of the material. Approximately every 10°F results in doubling the speed of cure. Therefore, at 85°F set time is cut in half, at 65°F the set time is doubled. Do not use on substrate at a temperature below 55°F.

**Coverage:** Approximately 30 square feet per gallon when applied at 50 mils (1/16th of an inch). One gallon equals 231 cubic inches.

### 6. AVAILABILITY

#### Packaging and storage:

BONSTONE A-100 and B-412X are available in quarts, gallons, and 5 gallon pails. Shelf life is approximately one year if kept in unopened cans in a dry area at 75°F.

\*\*If Bonstone A-100 is exposed to below room temperature conditions for extended periods of time, it may crystallize, giving it a stiff, grainy consistency. The product must be reconstituted before use by heating it to 150°F degrees. Stir until it becomes a homogeneous liquid.

### 7. WARRANTY

This product's warranty is limited to replacement of defective material and freight charges to destination only. Bonstone Materials Corp. is not responsible for consequential damages.

### 8. MAINTENANCE

Designed for application in areas inaccessible to maintenance procedures

### 9. TECHNICAL SERVICE

#### Lab Service

- spectrophotometric color matching available

#### Specification Service

- specifications for many applications
- specification writing dept. for unique application

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T E L 4 1 4 3 6 3 - 9 8 7 7 ■ F A X 4 1 4 3 6 3 - 9 8 7 9

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**4. TECHNICAL DATA**

BONSTONE™ ANCHOR A-100/B-412X

<u>Mixed Properties</u>	<u>Values</u>	<u>Test Methods</u>
Mix Ratio:	1 part A-100 to 1 part B-412X by weight	
Mixed viscosity at 75F	Creamy paste	
Pot Life at 75F:	35 minutes	
 <u>Cured Properties</u>		
Initial set time at 75F:	6 hours	
Full cure time at 75F:	within 24 hours	
<b>STRENGTHS</b>		
Tensile:	2,464 psi	ASTM D-638
Compressive:	61,000 psi	ASTM D-695
Flexural:	5,168 psi	ASTM D-790
 <b>MODULUS</b>		
Tensile:	74,000 psi	ASTM D-638
Compressive:	67,000 psi	ASTM D-695
Flexural:	541,000 psi	ASTM D-790
 <b>ELONGATION</b>		
Tensile: Elongation at break	3.8%	ASTM D-638
 <b>Shore D Hardness:</b> 91 <span style="float: right;">ASTM D-1706</span>		
<b>Heat Distortion Temperature:</b> 120F <span style="float: right;">ASTM D-648</span>		
<b>24 Hour Water Absorption:</b> 0.04% <span style="float: right;">ASTM D-570</span>		

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**DOUBLE MIX METHOD:**

The double mix method is used to completely and uniformly mix an epoxy product. The two components are mixed in one container, transferred to another, and remixed. This allows the contractor to scrape the final mixing container extremely clean without the possibility of using unmixed product.