

# Anchor Cement

**BONSAL® Anchor Cement** is an expansive, polymer modified calcium aluminate cement-based product.

## FEATURES AND BENEFITS:

- High Early Strength
- Pourable, Viscous Flow
- Sets in 20 Minutes
- Calcium Aluminate Cement-Based-Resists Corrosion
- Contains No Chlorides - Does Not Rust
- Interior or Exterior

## USES:

- Heavy Machinery
- Guard Rails
- Bolts
- Ceramic Fixtures
- Pipes in Concrete
- Aluminum Railings
- Banisters
- Dowels
- Parking Meters
- Ornamental Iron

## PREPARATION:

Evaluation of the substrate by a qualified engineer, architect or contractor using means that determine the cause of deterioration is strongly recommended. Particular attention is to be given but not limited to chloride penetration, corrosion of steel, galvanic activity, materials selection and compatibility, waterproofing, constructibility, quality assurance and methods of application and maintenance by the owner. Prepare holes based on project design requirements. Metals such as aluminum that will corrode due to their sensitivity to alkalis must be protected

Suggested guidelines are shown below for light anchoring projects.

Bolt Diameter	(3x) Hole Diameter	(8 to 12x) Hole Depth	# of Holes Per 9 lb. Pail
1/4"	3/4"	2" to 3"	90
1/2"	1 1/2"	4" to 6"	11
3/4"	2 1/4"	6" to 9"	3
1"	3"	8" to 12"	1
1 1/2"	4 1/2"	12" to 18"	1-25 lb. Bag

Clean area and remove all unsound concrete and any other foreign materials that will inhibit performance. Soak the hole and remove standing water prior to application.

## PREPARATION (Cont.):

If compatibility with railing or anchoring components is in question, field test material. Check materials to determine compatibility.

Anchor Cement can be used in contact with most materials. Installations subject to corrosive and cathodic environments require a protective coating of BONSAL® 118 Primer/Admixture on components prior to installation.

Coating components with BONSAL 118 Primer/Admixture will reduce permeability of ions in solution which may slow the effect of cathodic corrosion.

- ASTM D 4258 Surface Cleaning Concrete for Coating
- ASTM D 4259 Abrading Concrete
- ASTM D 4261 Surface Cleaning Concrete Unit Masonry for Coating
- ICRI Guideline 03730 Surface Preparation Guidelines for Repair of Deteriorated Concrete Resulting from Reinforcing Steel Oxidation
- ICRI Guideline 03733 Guide for Selection and Specifying materials for Repair of Concrete Surface
- ICRI Guideline No. 03732 Selecting and Specifying Concrete Surface Preparation for Sealers, Coatings and Polymer Overlays
- ASTM D 4580 Measuring Delaminations in Concrete Bridge Decks by Sounding
- ACI 201.1R Guide for Making a Conditions Survey of Concrete in Service
- ACI 201.3R Guide for Making a Condition Survey of Concrete Pavements

## MIXING:

Add the dry material to the required amount of water while mixing. The fluidity, strength, and hardness depends upon the amount of water used. The maximum recommended amount of water for a flowable mix is:

Anchor Cement	Water
9 lbs.	22 ounces
25 lbs.	1/2 gallon
50 lbs.	1 gallon

## MIXING (Cont.):

For trowel consistency, use slightly less water. Do not mix more than can be applied within 10 minutes. Do not add extra water after 5 minutes.

## PLACEMENT:

### Anchoring

Center fixture to be anchored and pour in material. Taper the material up and around the fixture in order to keep water from collecting at base. Allow three to four hours before light service.

### Placement Temperature

	Minimum	Maximum
Substrate	50°F (10°C)	90°F (32.2°C)
Mix	60°F (15.5°C)	70°F (21.1°C)
Air	50°F (10°C)	90°F (32.2°C)

## CURING:

Prevent evaporation by fogging exposed substrate after 20 minutes. Cure 24 hours before moderate to heavy use.

Materials modified with BONSAL Acrylic Additive or BONSAL 118 Primer/Admixture should be air cured, unless hot and/or drying winds or low humidity are present. Under such conditions, cure per Portland Cement Association - Design and Control of Concrete Mixes (EB001.12T) and/or American Concrete Institute 308 - Standard Practice for Curing Concrete.

## TECHNICAL DATA:

### Compressive Strength

ASTM C 109

1 hour	2,400 psi (16.5 Mpa)
24 hours	3,700 psi (25.5 Mpa)
7 days	4,700 psi (32.4 Mpa)
28 days	7,200 psi (49.6 Mpa)

### Tensile Strength

ASTM C 307

7 days	310 psi (21.3 Mpa)
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### Set Time

ASTM C 191

20 minutes

### Expansion

ASTM C 157

0.2%

ASTM C 827

0.12%

## TECHNICAL DATA (Cont.):

### Surface Hardness

ASTM D 2240

80 Shore D

### Alkalinity

Anchor Cement

11.0 pH

Class A Concrete

12.8 pH

### Pull-out Strength

ASTM C 900

1" Bolt

3/4" Bolt

14,000 lbs. Total Load

10,000 lbs. Total Load

## LIMITATIONS:

- **DO NOT** add any other materials to mix.
- **DO NOT** apply when air or substrate temperature is below 50°F (10°C) or above 90°F (32.2°C).
- **DO NOT** coat with materials that will trap water in the substrate.
- **DO NOT** use with incompatible component materials.
- **DO NOT** apply over substrates that are frozen or contain frost.
- **DO NOT** add excessive amounts of water.
- **DO NOT** mix more than can be applied in 10 minutes.
- **DO NOT** add extra water after 5 minutes.

## COLORS:

Grey

## COVERAGE:

124 cu. in. = 9 lbs. Anchor Cement  
345 cu. in. = 25 lbs. Anchor Cement  
1 cu. ft. = 125 lbs. Anchor Cement

## PACKAGING:

9 lb./4.1 kg pail  
50 lb./22.7 kg pail

## SHELF LIFE:

One year from date of manufacture

**CAUTION:** Contains Silicon Dioxide, Portland Cement and Calcium Hydroxide. Your skin may be sensitive to cement. Wearing rubber gloves is recommended. Avoid contact with eyes or prolonged contact with skin. In case of contact, flush thoroughly with water. For eyes, flush with clean water for at least 15 minutes and get prompt medical attention.

**KEEPOUTOF REACH OF CHILDREN**

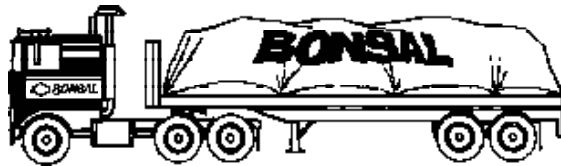
**LIMITED WARRANTY:** W.R. Bonsal Company (“Bonsal”) warrants that this product and the materials used therein meet or exceed the applicable standards listed and enforced at the time of manufacture. Bonsal will replace any product or part which proves defective due to quality of ingredients used or due to the manufacturing process itself. This Warranty shall apply only if the product is used in strict accordance with applicable specifications and instructions provided by Bonsal for its use, and Bonsal shall not be liable otherwise. Replacement of any defective product, or, at Bonsal’s option, refund of the purchase of any defective product shall be the buyer’s sole remedy under this Warranty, and Bonsal shall in no event be liable for any damages in excess of the purchase price of the defective product. **BONSAL SHALL IN NO EVENT BE LIABLE FOR ANY CONSEQUENTIAL, INCIDENTAL OR SPECIAL DAMAGES.** This Warranty constitutes the sole warranty given by Bonsal in connection with this product, and Bonsal has authorized no person to make or give any other warranties or representation, oral or written on its behalf. **IN PARTICULAR, THERE ARE NOT IMPLIED WARRANTIES, INCLUDING WITHOUT EXCEPTION WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.** No modification of this Warranty in favor of any buyer shall be valid unless given in writing and signed by an officer of Bonsal.

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