

# BONSAL® Commercial Anchor Cement

**BONSAL® Commercial Anchor Cement** is a polymer modified shrinkage compensating hydraulic cement-based product.

## FEATURES AND BENEFITS:

- High Early Strength
- Pourable, Viscous Flow
- Sets in 20 Minutes
- Interior or Exterior Use
- Resists Chloride Ion Intrusion

## USES:

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

## Safety Procedures:

Read and understand the Material Safety Data Sheet (MSDS) before using this product. Read CAUTION OR WARNING information on the package and in the product literature.

## PREPARATION:

A proper evaluation, by a qualified engineer, is recommended. Particular attention is to be given to conditions where concentrated amounts of chlorides will be anticipated (such as applications fronting salt water). Even though Bonsal Commercial Anchor Cement has been formulated not to contribute to the corrosion of aluminum, other job site conditions including contact of the metal railings or posts with the substrate, can contribute to such adverse conditions. In order to insure the best overall performance of the system, it is recommended that aluminum be coated (protected) when working with concrete substrates. Other variables that can affect the overall project performance include, but are not limited to corrosion of steel, galvanic activity, materials selection and compatibility, waterproofing, construction parameters, quality assurance and methods of application and maintenance by the owner.

## PREPARATION (Cont.):

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.

Commercial Anchor Cement can be used in contact with most materials. Check materials to determine compatibility. Installations subject to corrosive and cathodic environments require a protective coating on components prior to installation. The type and amount of protection shall be as specified by the component manufacture. Coating components with an effective protective material will aid in the prevention of corrosion.

- ASTM D 4259 [Abrading Concrete](#)
- ICRI Guideline 03730 [Surface Preparation Guidelines for Repair of Deteriorated Concrete Resulting from Reinforcing Steel Oxidation](#)
- ICRI Guideline No. 03732 [Selecting and Specifying Concrete Surface Preparation for Sealers, Coatings and Polymer Overlays](#)

Suggested guidelines are shown below for anchoring applications.

Bolt Diameter	(3x) Hole Diameter	(8 to 12x) Hole Depth	# of Holes Per 9 lb. Pail
1/4" (6 mm)	1" (25mm)	2" to 3" (51-76 mm)	24
1/2" (13 mm)	1 1/2" (38 mm)	4" to 6" (102-229 mm)	12
3/4" (19 mm)	2 1/4" (57 mm)	6" to 9" (152-229 mm)	4
1" (25 mm)	3" (76 mm)	8" to 12" (203-305 mm)	1

## MIXING:

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

Commercial Anchor Cement	Water
25 lbs. (11.3 kg)	2 quarts (1.9 liters)
50 lbs. (22.6 kg)	4 quarts (3.8 liters)

## 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 from initial mixing.

## 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.

The Air, Mix & Substrate temperatures should all be between 45°F (7°C) to 90°F (32.2°C)

## CURING:

Bonsal Commercial Anchor Cement should be air cured, unless hot and/or drying winds or low humidity are present. Under such conditions, protect by fogging after 20 minutes, cure 24 hours prior to moderate to heavy use.

## TECHNICAL DATA: Typical Results

### Compressive Strength

ASTM C 109

1 1/2 hours	2,000 psi (13.8 Mpa)
24 hours	8,000 psi (55.2 Mpa)
7 days	10,000 psi (69.0 Mpa)
28 days	11,000 psi (75.8 Mpa)

### Set Time

ASTM C 191

20 minutes - (initial)

### Expansion

ASTM C 827

0.10%

### Length Change at 28 Days

ASTM C 157

Air Cured	-0.10%
Moist Cured	+0.05%

### Pull-out Strength

ASTM C 900

1" Bolt (25.4 mm)	14,000 lbs. Total Load (6350 kg)
3/4" Bolt (19 mm)	10,000 lbs. Total Load (4536 kg)

## LIMITATIONS:

- **DO NOT** add any other materials to mix.
- **DO NOT** apply when air or substrate temperature is below 45°F (7°C) or above 90°F (32.2°C).
- **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 from initial mixing.

## COLORS:

Grey

## YIELD:

119 lbs. (53.9 kg) = 1 cu. ft. (.02 m<sup>3</sup>)

50 lbs. (22.6 kg) = .42 cu. ft. (1.2 m<sup>3</sup>)Pail

## PACKAGING:

50 lb.(22.7 kg) pail

## SHELF LIFE:

One year from date of manufacture

## DISPOSAL:

Comply with all applicable local, state and federal regulations for disposal of unusable or contaminated materials. Dispose of packaging/containers according to local, state and federal regulations.

## **WARNING!**

**MAY CAUSE SKIN AND EYE BURNS OR IRRITATION. INHALATION IS KNOWN TO CAUSE CANCER OR DELAYED LUNG INJURY.**

**Avoid contact with eyes and skin.** This product contains hydraulic cement and lime. When mixed with water and/or latex, it results in a solution that is highly alkaline and may burn or irritate the eyes or skin. Wear safety glasses or goggles, protective clothing, shoes, and gloves to prevent eye and skin contact. **Do not take internally.**

**Avoid breathing dust.** This product contains crystalline silica. Prolonged exposure to crystalline silica dust is known to cause lung cancer or delayed lung injury, including silicosis. Take measures to eliminate or control dust while handling or placing this product. Wear a respirator approved for protection against crystalline silica dust.

**Warning:** This product contains a chemical known to the state of California to cause cancer.

**First aid: If swallowed,** drink one or two glasses of water to dilute. Do not induce vomiting unless directed to do so by medical personnel. Get immediate medical attention. **In case of contact,** flush eyes or skin thoroughly for a minimum of 15 minutes with clean water and get prompt medical attention. Wash clothing and thoroughly clean shoes before reuse.

Read the Material Safety Data Sheet (MSDS) for this product prior to use. For additional information call Bonsal American at **704-525-1621**. For emergency information call CHEMTREC at **800-424-9300** or **703-527-3887** (Outside USA).

**KEEP OUT OF REACH OF CHILDREN**

**PC-01-1000A** supercedes previous editions

## Technical Assistance

**NOTE:** Consult Bonsal Technical Services at

“Toll Free **USA ONLY**” 1-800-334-0784

Outside the USA at: 704-525-1621

for the most current product information on this product  
or e-mail - [commercialproducts@bonsal.com](mailto:commercialproducts@bonsal.com)

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